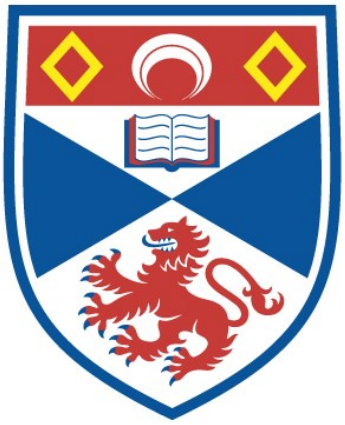
THE SUEZ CANAL AND THE TRENDS OF BRITISH TRADE TO AND FROM THE MIDDLE AND THE FAR EAST IN THE PERIOD 1854 – 1966

Abdelrahman Yousri Ahmed Mohammed A.

A Thesis Submitted for the Degree of PhD
at the
University of St Andrews



1968

THE SUEZ CANAL AND THE TRENDS OF BRITISH TRADE TO AND FROM THE MIDDLE AND THE FAR EAST IN THE PERIOD 1854 - 1966.

by

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Thesis submitted for the degree of
Doctor of Philosophy in the
University of St. Andrews,
Scotland.

March 1968.

DECLARATION

I hereby declare that this Thesis is based on my own readings and research , that it has been composed by myself , and that it has not been accepted in any previous application for a higher degree.

Abdelrahman Yousri Ahmed M.A.

St.Andrews,Scotland.

March 1968.

STATEMENT OF QUALIFICATIONS

In June 1960 I obtained my Bachelor degree in Economics with grade "Very Good" (equivalent to 80% +) from the University of Cairo - Egypt . I was admitted to the University of St.Andrews as a research student in October 1964 and began my work for this Thesis from that time.

Abdelrahman Youseri Ahmed M.A.

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CERTIFICATE

I certify that Abdelrahman Yousri has devoted not less than 9 terms to research work under my supervision, that he has fulfilled the conditions of Ordinance No.16 (St.Andrews), and that he is qualified to submit this thesis in application for the degree of Doctor of Philosophy.

Professor of Political Economy.

..31..March 1968.

ACKNOWLEDGEMENTS.

My gratitude is due to my Supervisor, Professor James Nisbet. The least that may be said is that he has always given up a great deal of his time to reading and discussing drafts of my work. I greatly gained from his supervision and from learning his views.

I am also indebted to the University of Alexandria (Egypt) whose generous grant has enabled me to come to Scotland's oldest University and carry out my research work.

Abdelrahman Yousri A.M.A.

St. Andrews, Scotland.

March 1968.

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PART I

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THE SUEZ CANAL AND BRITISH TRADE INTERESTS IN THE EAST.

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SECTION I;

HISTORICAL BACKGROUND

The Old Trade Routes to the East. and Britain's Share in the Eastern Trade.

Before the discovery of the Cape route to the East by the Portuguese in 1498 the Eastern trade was carried across one (or another) of the three great overland routes which existed at that time. These were from Aleppo via the Euphrates Valley, from Damascus via Jedda and from Alexandria or Damietta via the Nile Valley to the Red Sea. As these routes were all within the dominions of the Ottoman Empire, they functioned suitably for their own trade coming from different parts in Eastern Europe and the Mediterranean. Besides, these routes channalled the trade of the Mediterranean seaports which concluded friendly or, sometimes, capitulations agreements with the Porte. On the other hand, the merchants of the Western Seaports of Europe were at a disadvantage under these conditions. By the overland routes they were relatively at a greater distance from the East. Thus besides the cost of transportation and the time spent on the journey they had to pay more tolls to all the countries through which they had to pass to reach their final destinations in the East. Moreover, their trade was very risky because of the unfriendly attitude of

the Ottomans towards them.[1]

The discovery of the Cape route therefore marked a new era in the trade of the Western European countries. It enabled them to overcome the enormous difficulties which were hitherto encountered in crossing vast areas within the territories of the Ottomans. For a long run analysis this was not, however, the most important change in the situation. It might be argued that the most significant change which resulted from the opening up of this new sea route was that the European merchants trading with the East could now depend entirely on ships to carry their trade over the whole journey. Apart from being saved several inconvenient transshipments, they no longer had to depend on domesticated animals to carry their goods. Ships therefore gained favour as a means of transport for Eastern destinations and since they were faster and more maneeuverable, over such long journeys, the discovery of the Cape provided a new incentive for Eastern trade. For the same

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(1) France made her first agreement with the Ottomans in 1535. Sixty nine years elapsed before England also accepted the conditions of the Ottomans in order to diminish the difficulties which faced her merchants trading in other Ottoman dominions.

reason priority in Eastern trade has been given ever since to the maritime powers. The Portuguese played the greatest rôle in the trade with the East for about a century mainly because of their mercantile superiority (at sea). Later the Dutch and the English took their places, followed by the French. No statistics exist to furnish us with a picture of that time and to show the decline in the volume of East-West trade which used the overland routes. However, the fact itself can be proved by comparing the importance of the Mediterranean seaports with the Atlantic seaports, before and after 1498, as regards Eastern trade. The first depended on the overland routes before 1498 and after that they continued in their attempts to maintain and develop them as a counterpoise to the Cape route.(2) Nevertheless their trade with the East declined relatively to that of the Atlantic seaports which on the strength of their sea power managed to appropriate for themselves the lion's share in this trade. Many writers traditionally pointed

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(2) ...."after the decline of the Venetian Republic had set in, it was the French, by means of the friendly relations which they established at the Sublime Porte, ...who established an almost undisputed monopoly of of the Overland Eastern trade. Successive French governments, for political as well as for economic reasons, set great store by the maintenance and development of the overland route as a counterpoise to the Cape route"..... pages 4-5 - The Making of the Suez Canal. J. Marlowe.

to the fact that the Atlantic sea ports were geographically favoured more than the Mediterranean sea ports when they come to explain the changing importance of the countries trading with the East since the discovery of the Cape route. Certainly, such an explanation must be given its weight, but not at the expense of other and more important facts such as the wealth of the countries and their maritime power. France, for instance, had sea ports on the Atlantic as well as on the Mediterranean and her trade with the East, when the Cape route was discovered was larger than that of any of the Atlantic sea ports. But her importance was declining relatively in this trade by the emergence of stronger sea powers. According to an estimation (3) of the early 1850's the volume of the Eastern trade was in the region of 2 million tons, of which 1.4 million tons were British. The Dutch conducted .3 million tons while the French trade constituted only .1 million tons. It is more than likely that all the English and the Dutch trade went by the Cape route (4) and thus, at least, 85% of

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(3) Estimation by two Frenchmen, M. Bande and M. Chemin Dupontes - quoted by Edinburgh Review, vol.103, 1856 - in a paper on the subject. The figure which was estimated for British Eastern trade agreed more or less with the tables presented to Parliament and those published by the E. India and China Association.

(4) The English trade with the East did not use the overland route to any significant degree before the establishment of Alexandria-Suez railways.

of the Eastern trade was alloted, by the first half of the 19th century, to Western countries carrying their trade by sea.

Attempts to Revolutionise the Way to the East via Egypt. The Development of the Suez-Alexandria Overland Route and British Interests.

During the 18th and 19th centuries as political and economic rivalry with England was increasingly growing inside France, the French thoughts turned always to the possibility of a shorter way to the East as the main solution for recovering their old large share in its trade. Among different projects to this end the idea of linking the Red Sea and the Mediterranean by a direct canal fascinated the French. As regards the British, the Cape route continued to suffice for the transport of their goods but it no longer functioned satisfactorily for purposes of communications. The increasing number of the British tradesmen, officials and soldiers in Britain's Eastern colonies required more efficient means of communication. It was realized that Falmouth might be reached from Calcutta in less than two months, the journey from Calcutta to Suez taking 30 days and that from Suez to Alexandria taking six days. This was only half

the time spent in the voyage around the Cape of Good Hope. Gradually, therefore, during the first half of the 19th century British mail and passenger traffic abandoned the Cape route and traversed the Suez overland route in their way to the East. By the 1850's, the importance of the overland route - via Suez - was increased by the establishment of a regular service by the P. & O. Co. (Peninsular and Oriental Co.) mail boats between Asian ports and Suez, and by the completion of the Suez-Cairo-Alexandria railways - 1857.

However, in addition to the mail and passenger traffic, steadily increasing quantities of some valuable articles which Britain imported from the East (such as indigo, silk and silk piece goods whose value was approximately £400-£1,000 per ton) came by the Suez overland route. It was widely believed during the 1850's that the completion of the Suez-Alexandria railway would result in diverting the great stream of Eastern trade from the Cape route to the Red Sea. Nevertheless, in spite of quick transit and low freight charges for the use of the railways this

was unrealized.(5) The necessity of two transshipments, at least, en-route discouraged the trade in bulky articles, and these continued therefore to use the Cape route to the East.

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(5) Chatterton, E.K., described the Suez overland route before the construction of the railways between Suez-Cairo-Alexandria...He said..... "The P. and O. Co. had...to land their passengers at Alexandria and boats and camels had to be employed until the Suez port is reached".... "It was a complicated journey, for this overland route was mostly an over water route. By means of Mahmoudieh Canal the passengers and goods were sent from Alexandria to the Nile, whence they proceeded by steamer to Cairo. From there they travelled through the desert to Suez. 3,000 camels had to be employed for transporting a single steamer's loading; every package had to be subjected to three separate transfers and the inconvenience was indeed considerable". Therefore it was believed in Britain that the railways would solve the problems involved in the Suez overland route. (Chatterton, E.K, (Steamships and their (Story, P. 115)

However it is very likely that the railways between Suez and Alexandria helped very much the trade of Mediterranean countries to develop since they were dependent on the Suez overland route.

SECTION II;

THE BUILDING OF THE SUEZ CANAL.

Reasons for British Opposition to the Canal Project.

The idea of connecting the Red Sea and the Mediterranean, through the Isthmus of Suez, in order that Egypt could be traversed by a navigable waterway was not a new one. Historical evidence shows that it goes back to very ancient times.(6) Several canals were dug in different times, perhaps between 1887 B.C. and 641 A.D. to link the two seas indirectly through the Nile. The canal was dug, then allowed to fall into disuse, and then it was re-opened at different times depending on the need of the Egyptian trade and the

(6) Some Historians suggest that the earliest canal was dug under the Pharaoh Semusert 1887-1849 B.C. and then more than three centuries later under Darius, the Persian Ruler 521-485 B.C. However this was stronger evidence to prove the opening up of a canal, which connected the Red Sea and the Mediterranean indirectly through the eastern branch of the Nile, under Ptolemy II. 285-246 B.C.,under Trajan the Roman Rule 96-117 A.D. and then under Amr Ibn Elass, the Moslem Ruler 641 A.D. None of the earliest canals had perhaps been used for more than a century except the last one that was cut during the Moslem rule. It had remained until 776 and then was blocked by the order of one of the Abbasid Caliphate in order to hinder the transports between Egypt and Arabia for political reasons.

trade which took place between the old trading seaports East and West of Egypt. By the 19th century the idea of the canal was revived by Napoleon after his conquest of Egypt. The idea of a direct link between the Red Sea and the Mediterranean interested him so that he brought with him a mission of French engineers, headed by Charles Le Pere a distinguished French engineer, to examine the possibility. Their report to him was disappointing, for they believed the level of the Red Sea to be higher, about 30 feet, than the Mediterranean so that the idea of a navigable canal was impracticable. Mohammed Ali, a vigorous man of bold ideas, who ruled Egypt after the French Army withdrawal, financed fresh research on the Suez Canal project. It has been frequently argued that it was his French friends who urged him to do so. However at a later stage his engineers ceased their research when he lost his enthusiasm and abandoned the idea on purely political grounds.(7)

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(7) Mohammed Ali believed that if a canal were constructed, either Britain or France would attempt to colonise Egypt.

In 1854 De Lesseps succeeded in gaining a "firmans" from the Viceroy of Egypt, to provide for an international company known as the "Compagnie Universelle du Canal Maritime de Suez". The "firmans" or the Concession charters provided that the canal works were to be executed at the cost of the company, but all the fortifications were to be installed by the Egyptian government alone. Besides, the Egyptian government undertook to supply the labourers to the company and the wage rate was determined at 1 shilling to ls.& 4d. daily. De Lesseps who was a personal friend of the Egyptian Viceroy had, therefore, obtained not only a business contract but also some generous gifts to start the work for the projected canal.(8) From 1854 until the work on Suez Canal was completed De Lesseps faced strong opposition from the successive British governments towards his project. But, having succeeded in fulfilling the numerous conditions that would allow work to begin he strove until he accomplished it.

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(8) See texts of the first and the second Concessions of the Suez Canal in A. Wilson - The Suez Canal, p. 173-179.

It can easily be recognised that the 19th Century's pioneers of the idea of a Suez Canal were almost without exception Frenchmen. As it has been explained, they were all convinced that such a canal, by reducing the freight charges of the Eastern voyage, and by making Marseilles nearer than Liverpool to Calcutta, would eliminate the British monopoly which had existed in the East for centuries and would enrich France. These hopes of the French raised a fear in Britain that the Canal project might well serve France's interests in the Eastern markets. Whether or not such hopes were to be realized they instigated what was probably the first British opposition to the Canal project. But, although France was nearer to the mouth of the suggested canal, it was undoubtedly a mistake to presume that this fact alone would give her the ability to break the British monopolistic situation in the Eastern market. Such an enormous difference which existed between the volumes of British trade and French trade with the East, by the 19th century, could not be attributed entirely to the long voyage to the East and high freight charges in the absence of a Suez Canal. It must be emphasised that Britain had led the industrial world from the time of the Industrial Revolution up to that date. Britain's industrialists

were expanding their business faster than their European competitors and it was the British consumers who were enjoying the highest and a rising standard of living. No wonder therefore that British imports of raw materials and foodstuffs from the East and their exports thereto (and in general British imports and exports) grew faster than those of any other European nation. In addition, Britain at that time had the strongest merchant fleet in all the world,(9) and therefore, the British shipping took the largest part of the world's carrying trade. Thus, if the Suez Canal project could shorten the sea route to the East, cheapen transport and facilitate trade in general

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(9) F.N. III

Shipping of the U.K. in relation to world shipping

Year	World Sail Mill.N. Tons.	British Sail % of the World	World Steam Mill.N. Tons	British Steam % of the World
1820	5.81	38.2	.02	15.0
1840	9.01	27.6	.37	24.3
1860	14.89	28.2	1.71	26.3
1870	12.90	35.5	3.04	36.5

it would necessarily be advantageous to Britain more than any other European country trading with the East. The fear that France or any other Mediterranean countries would challenge Britain in her dominance in the Eastern market was sometimes, therefore, rejected. Gladstone (in a Parliamentary debate in 1858 on the Suez Canal) argued that the new sea route to the East would certainly fall within the control of the strongest maritime power in Europe....and what could that power be but Britain? He accused the government of opposing a scheme on the face of it beneficial to mankind on very flimsy political grounds. As a believer in a free competitive world he asked the government to "regard the Suez Canal as a commercial project, as such let it stand or fall"..

One important point must be added to the above argument, that is about the future of British entrepôt trade which served countries East and West of Suez. In fact the growth of this trade had particularly depended upon the favourable geographical position of the British island as long as the Cape route remained the highway to the East. The future of British entrepôt trade was, therefore, still questionable. If a Suez Canal would stimulate the direct trade between the Mediterranean region and the East, British entrepôt trade which hitherto served them might not increase as rapidly as it had done previously or it might well decline

But to many minds it was hard to believe that a Suez Canal would stimulate the direct trade of the majority of the Mediterranean countries. It was doubted that Austria or Italy whose requirements of Eastern products were very small, could embark in direct trade with the East no matter to however great an extent the trade route to the East was shortened or cheapened. An article on the subject - published in Edinburgh Review 1856 - expressed well this argument but it must be mentioned here that the whole analysis of the writer had depended on the idea that the Suez Canal would bring about a slight reduction in the cost of transport, so that neither the structure nor the volume of the East-West trade would be affected. Thus until they developed their need for Eastern products or their ability to export anything to the East, they would find it far cheaper to resort to London, the greatest emporium of Europe.

Had the British, by that time, been sure of their country's ability to meet the rivalry of other European countries in the Eastern markets whether the highway to the East was around the Cape of Good Hope or via the Suez Canal one might ask - why, then, the successive British governments had furiously opposed the Canal project? Most of the writers on the subject argued that the main reason for the British opposition was therefore "political". They argued that it was

the Suez Canal project on the surface, but under the surface it was the French desire to colonise Egypt and then to pursue further adventures in Africa and in the East which warned the British government, inspired its fears and motivated its opposition to the project.(10) Hence the British government saw that the formation of a "French" company to carry out the Suez Canal project was a step in a new French colonial expansion in the East.

Although this argument helped to explain the situation as it was seen and as political documents concerning the dispute over the Canal project might reveal, it overrated the significance of the so called "political reason" behind the British government opposition. It is clear that the opposition to what was thought a new French imperial expansion in the East was a measure to protect Britain's political as well as economic interests in that part of the world.

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(10) The aims of Bonaparte's Egyptian expedition, as officially defined by a secret decree, included the conquest of Egypt and the exclusion of English from all their possessions in the East. He was also to have the Isthmus of Suez cut through to assure the free and exclusive possession of the Red Sea to France.....
Rose, J.H. Life of Napoleon.
See also Marlowe - The Making of the Suez Canal - Chapter I.

The measures taken by the British government in its opposition were, therefore, intended (1) either to destroy completely the Suez Canal project as long as it was operated by a French company, (11) or (2) to reduce the power of the French company to the minimum by allowing them to direct only the management of the technical and commercial activities of the Canal project and this would be achieved by withdrawing from them their rights over the Canal zone and over free Egyptian labour, or (3) to delay the completion of the project until an international agreement could be reached to guarantee equal rights to all the maritime powers.

At the beginning the opposition of the British government to the Canal project was relatively mild. It was believed that the construction of a sea level canal was technically impossible. In January 1856 a group of leading engineers from Britain and other principal European countries, who were employed by De Lesseps to survey the Canal project, reported that the Suez Canal project was not technically impossible. Later De Lesseps was able to start the work and to make continuous progress. Accordingly the British

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(11) The French shares constituted 207,111 out of a total 400,000, and the management was to a very great extent French.

government's opposition to the Canal project grew to a climax. The British were quite alarmed at the possible success of the Canal project, even if it were regarded as being a remote possibility.(12) Not, however, because of the advantages which a shorter way to the East might give to France or other Mediterranean countries, but because of the possibility of France controlling the flow of Eastern traffic some time in the future through a monopoly possessed by the Suez Canal Co.

By 1864 an agreement was reached between the British government and De Lesseps and the long dispute between them was brought to an end. The Suez Canal Co. agreed to abandon its claims of free labour in return for compensation of 84 million francs. Secondly all

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(12) The British government's opinion was affected by Robert Stephenson, the great British engineer, who examined the Isthmus of Suez and judged that the construction of a sea level canal was technically impossible. Later, it was believed that the Canal project was "physically impossible except at a prohibitive cost. If undertaken it can only be for political reasons" (From Lord Clarendon, then Secretary of State for Foreign Affairs to the French Ambassador in Britain - Wilson, A. Suez Canal Chapter II). The cost of the project was expected to rise from 8 million sterling estimated by De Lesseps to something in the region of 16 or even 20 million - Edinburgh Review, Vol. 103, 1856 - and it was anticipated that De Lesseps would never be able to get such a large amount of capital to accomplish his project.

lands on the isthmus covering 600,000 hectares and the fresh water and all subsidiary canals and the navigation rights thereon were likewise to be abandoned for 46 million francs. (It was the Egyptian government which was to pay these amounts in compensation).

The agreement reduced the activities of the Canal company to purely technical and commercial activities since it prevented the company from acquiring any political power or local influence over the lands surrounding the Suez canal. The agreement therefore had implicitly secured the neutrality of a new sea route to the East which might prove of real importance in future.

British Investors and the Finance of the Suez Canal.

The opinion of the business circles in Britain was doubtless more favourable to the Canal project than that of the government. More than ten years before De Lesseps obtained the first firmans for a Suez Canal, Arthur Anderson, the Chairman of the P. & O. Co. (in 1841) urged Palmerston to support the Suez Canal project.(13) In 1855, the Canal project was

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(13) He also suggested that the Canal might be built by a private company under the political guarantee of the great powers. Palmerston's reply to such a suggestion, if any, is not known. Jenks, p.300-304 "the migration of British Capital".

received in Britain with sympathy when De Lesseps visited London in an attempt to place the project before the British people themselves. The P. & O. Co. ignored the official attitude of the government and showed every sympathy for the project of the Suez Canal. The East India Co. also adopted a kindly attitude. The steady development of transit trade by the Suez overland route had certainly favoured any attempts to revolutionize the way to the East.

However, the British people did not attempt to assist the Suez Canal project in a positive way. And when De Lesseps opened his subscription lists on November 1858, there were no applications from Britain. The following explanation might well account for the reason why the British investors refrained from sharing in the finance of the Suez Canal.

Undoubtedly public opinion in Britain was largely influenced by the official attitude of the government and by the reasons behind this attitude. Many investors became uncertain of any possible engineering success in the Canal project. Just before the subscription lists were opened, Disraeli viewed the Suez Canal project in the House of Commons as "the most futile attempt and totally impossible to be carried out". Other British investors might have accepted such a risk as was

involved in the Suez Canal project, but they were quite aware that they must not finance a project which would be favourable to France but prejudicial to their own country as Palmerston once declared in the House of Commons.

Also it was argued that the Suez Canal project would fail as a commercial project, even if it would be possible to be carried out technically. In an article published by De Lesseps, the writers argued that the volume of trade with places East of Egypt had increased from, approximately one million tons in 1841 to 4 million in 1851 and then to about 16 million by the middle of the 1850's. By the time the Canal would be completed, they argued, the latter estimation would be far exceeded. They foresaw that the trade in bulky raw materials and foodstuffs produce of India and other Eastern territories would finally form a part of the Eastern trade. This would be the outcome of much lower freight charges which would result from the opening of the Canal. Besides Australian trade with the mother country which was increasing at a colossal rate would all depend on the Suez Canal route. Finally, they argued that the Suez Canal route would not only be a highway for the trade between Europe and the East but also for the American trade with China; for the

latter would certainly adopt the new sea route which would be easier, shorter and safer in comparison with the route by Cape Horn. Truly many aspects of this argument were realised after the opening of the Canal, but the estimates for the volume of Eastern trade were very much inflated.(14) The writers of the articles themselves felt that the estimate of 16 million tons was too high and they diplomatically reduced that to 6 million in a later step in their argument.(15) Of these 6 million they estimated that at least 3 million tons would use the Suez Canal immediately after its opening (which would make an income of 30 million francs per annum if every ton was charged 10 francs).

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(14) See page 4 & F.N. (3).

(15) The writers of the Articles said..."As however we are addressing ourselves to the commercial world and have to convince all minds, even the most timid, we should fix on a figure, and that the figure should not startle anyone. We have adopted 4 milliards of francs, answering to 6 million tons which according to what we have been showing is without doubt already exceeded at present or certainly will before the close of the undertaking". From Articles published by De Lesseps before November 1858.

As this argument had very much exaggerated the volume of Eastern trade and consequently the expected profits from the Suez Canal project immediately after its completion, it was vulnerable to criticism and it was rightly shown to be a type of commercial propaganda. In addition the opponents of the Canal project argued that the Australian traffic would not use the Suez Canal route. They maintained that the small saving in distance by the Suez Canal in the particular case of Australia would be insufficient to induce a change in the traditional Australian route particularly when that was characterised with its favourable winds.(16) Up to that time sea-borne trade was carried by sailing vessels, therefore seasons of voyages, the time spent in them as well as the route which had to be followed throughout any voyage were determined by the winds.

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(16) The distance saved by the Suez Canal route from London to Melbourne was 555 nautical miles and this obviously represented a small gain, in comparison with 4,393 nautical miles to be saved in the London-Bombay voyage and 3,381 nautical miles in the London-Hong Kong voyage. (See also Table 8). Therefore, there was still a chance left to the "wind" to determine the route to Australia as long as sailing vessels would carry the British trade.

More important in the argument against the Canal project was that which concerned the use of the Suez Canal as such. It was reported by some officers appointed by the East India company that the conditions of navigation in the Red Sea were very unfavourable for sailing vessels. On the other hand their report showed that "the same circumstances which render the Red Sea so unsuited to navigation by sail are most advantageous to steamers"[17]. Thus the prospects of a Suez Canal depended, at least in part, on the future competition between steamers and sailing ships. Supporters of the Suez Canal project in Britain, who were mainly employed by De Lesseps, challenged the report of the East India Company about navigation in the Red Sea but they did

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(17) In reasoning that, the officers of the East India Co. said in their report..."The straightness of the middle channel, its depth and freedom from shoals are all that can be desired. Its narrowness prevents there ever being a serious swell in it, and the light airs that prevail during 9/10ths of the year are most favourable (to steamers), while a vessel going ten knots an hour may safely despise a current of one knot in whatever direction it may be flowing". Navigation in the Gulf of Akaba particularly was described as impossible for a sailing vessel mainly because of the violent and almost continuous northerly winds which prevail there.

not achieve much since they could not base their argument on such a strong foundation as did their opponents. Later they made an attempt to throw doubts on the future of sailing vessels. In a pamphlet published on the subject in 1856, the writer argued that the use of steamers and sailing ships with screw was rising steadily in oceanic voyages and he prophesied that at the latest, by the middle of the 1870's any ships dependent on sails alone would not be freighted for long voyages. By that time, the steam tonnage was actually growing at a faster rate than sails, but only because it had started from an almost zero level before the 1820's, and after all it still represented by the end of the 1850's a very small proportion of the total world tonnage of shipping (See Table in F.N.(9)). Moreover the early steamer's boilers consumed a large amount of fuel. Propulsion by steam required so much bunker coal that little cargo space was left, and for this reason, steamers were not useful for goods traffic and their use was limited to passenger and mail traffic. This being the situation, the opponents of the Canal project could not anticipate that the Suez Canal would channel any goods traffic. As regards mail and passenger traffic, the Canal would be in serious competition with the Suez-Alexandria railways which were doing the same job and which the British government favoured.

The Opening of the Canal and the Early Difficulties

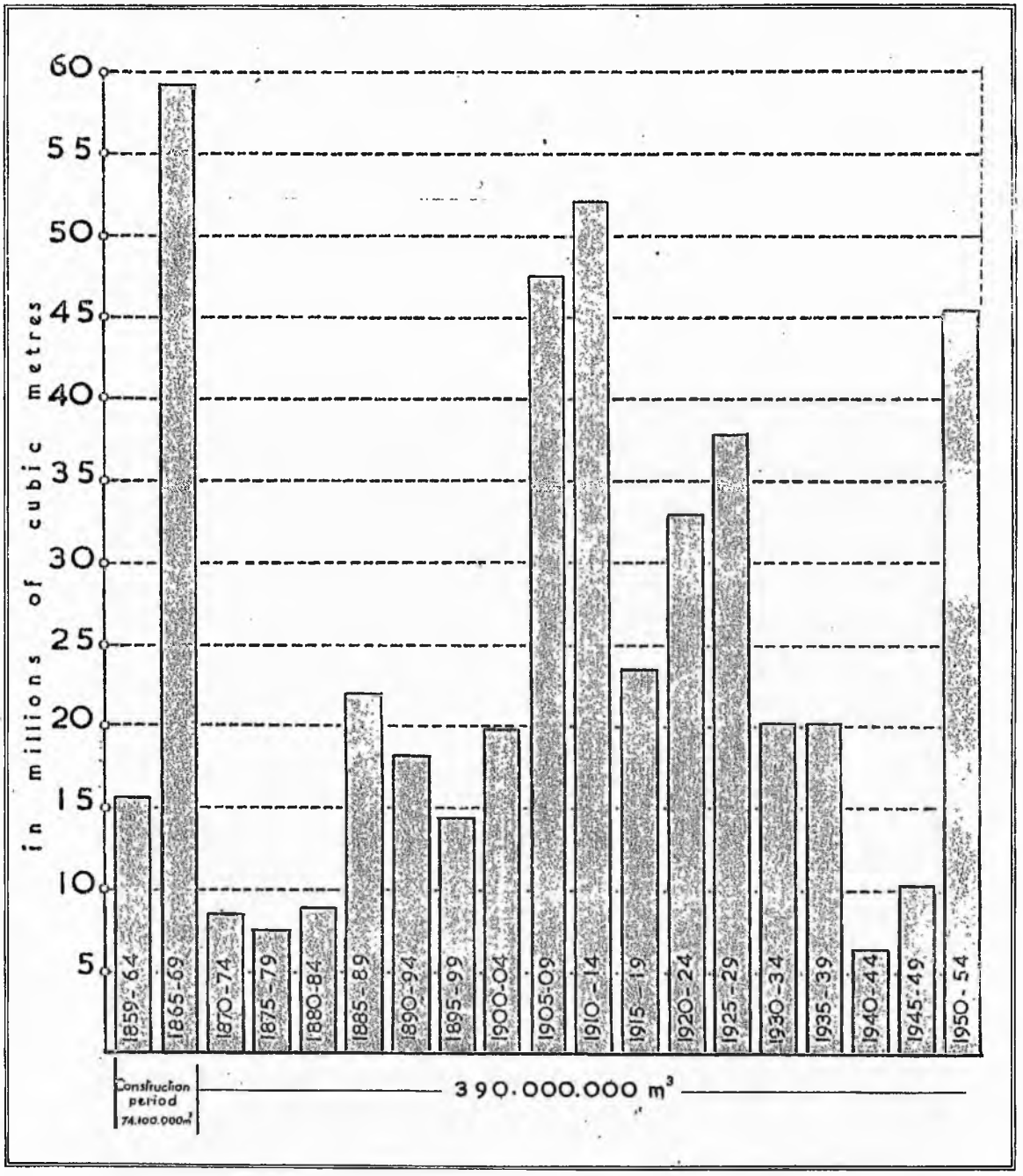
The Early Financial Troubles of the Canal Company and Their Repercussion.

By the middle of the 1860's the Canal work was very rapidly progressing - see diagram 1. However as the work was carried out in conditions more difficult than had at first been visualized the costs accordingly were going up over the original estimate of 200 million francs and the company was running short of capital. By 1867 the company floated 333,333 bonds of 500 francs, issued at 300 redeemable in 15 years and carrying a 5% rate of interest. Perhaps the need for further finance had caused some pessimism with regard to a possible commercial success for the Canal project so that the bonds proved unattractive and were only sold after the French government guaranteed them. In November 1869, the Suez Canal was finally opened. Until the Canal was cut it had been necessary to extract 74 million cubic meters of rubbish some of it dry but mostly requiring to be dredged. The total cost of the project stood at 453,645,000 francs in the company's balance sheet fo 31st December 1869.

Against the expectations of the Suez Canal's projectors, the opening of the Canal did not immediately revolutionize the way to the East. The aggregate tonnage of ships navigating the Canal in 1870, instead of being

DIAGRAM (1).
(source: Suez Canal Publications)

Quinquennial statistics of excavation and dredging carried out for the digging, maintenance and improvement of the Suez Canal



at least 3 million tons as they estimated, was under half a million. During 1871 Canal traffic rose by about 75% to reach 761,000 tons. Thus receipts were smaller than expenses by 9.6 million francs in 1870 and by 2.7 million francs in 1871 and the company failed to pay dividends or even the minimum of 5% on shares to shareholders who naturally were expecting returns on their investment as soon as the Canal was opened, (according to the promises given to them). The price of the Suez Canal 500 f share obviously reflected the poor state of traffic and consequently dropped to 272.86f in 1870 and then to 208.13f in 1871.

Two reasons were mainly responsible for the small volume of traffic in the Suez Canal immediately after the opening. Firstly, the work of the Canal was not yet complete as it had been hitherto projected owing to the shortage of capital which the company faced during the 1860's. Many portions had not been deepened to the projected minimum of 26 feet and in some places the curves in the channel had been performed so abruptly as to render navigation dangerous. These and also other works, as for example signalling arrangements along the line of the Canal, were not finished neatly and had been executed very speedily in the hope that the opening of the Canal as early as possible would provide the Company with funds necessary for the full

completion of the work. Secondly, and more important, the Suez Canal route proved to be entirely unsuitable for navigation by sailing vessels. Thus sailing vessels which in 1870 represented 81% of world shipping could not benefit from the shortening of the way to the East. Steamers on the other hand were still mainly used for mail and passenger traffic or for goods traffic in short voyages.

Besides, the 10 francs per ton dues, whether traversing ship was in cargo or in ballast, were considered heavy and deterred a number of steamship owners from using the Canal route.

In 1871 De Lesseps, who previously used all his intelligence and diplomatic skill to challenge the British government's opposition to his project, and who struggled to solve obstacles of every kind in order to perform his gigantic project, felt incapable of solving the financial problem of his Company. It seems that he was quite uncertain that the Suez Canal would make any profits in the near future so that he suggested that Britain might purchase it. He realized the importance of British shipowners to the Canal since the first year and he clearly expected that Britain would welcome the offer. Later, however, he changed his suggestion and recommended that the Suez Canal might be purchased collectively by the maritime powers for £12 million plus annual payments of 10 million francs to the shareholders.

The Porte and Khedive Ismail of Egypt rejected such a suggestion but favoured, however, De Lesseps' first offer to Britain.

Gladstone, then Prime Minister, had always seen no reason why Britain should not gain from the Suez Canal whether it was owned by her or by any other nation. Thus, Gladstone's Cabinet treated the matter of the purchase of the Canal on purely financial grounds and refused the offer. This was the attitude of the British government not only towards the purchase of the Canal but also towards any sharing in the control of the Canal Company, in spite of the fact that some British officials recognised, in their reports, that the Canal might well assume a great deal of importance to the British interests East of Suez in the future.(18)

It seems that the plight of the Canal Company besides the decision of Britain, the main user of the

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(18) Lord Farrer, the President of the Board of Trade, suggested that the Canal should be placed under international control. "Complications and difficulties",.he said,."would be endless so long as this great highway of nations remains in the hands of a private company". However no action was taken by the Liberal Government. General Stanton, then Consul at Cairo, urged Gladstone to purchase the Canal as the Porte and the Khedive suggested. Wilson, R.- The Suez Canal, p.45-46.

Canal, to stand neutral towards it, forced De Lesseps to adopt arbitrary measures in dealing with his financial plight. Perhaps delaying British ships navigating the Canal and hindering them in different occasions and on various excuses was meant to be a sort of warning to Britain to change her neutral attitude and attempt to share in the company as well as in solving its financial problem. De Lesseps also started to think of easing the problem by raising the dues. By article 17(3) of the Second Concession Charters of the Suez Canal, the Company was given the right to levy dues on passengers and vessels traversing the Canal within a limit of 10 francs "per tonneau de capacite de navires et per tête de passenger". Being unable to violate the concession terms openly by raising the dues over 10 francs, Lesseps adopted a new way in computing the shipping tonnage by which the dues were actually raised but indirectly. At the beginning the new system was not opposed by any user. However, soon the Canal users realized that it was to increase dues levied upon their ships. British shipowners in particular realized that the new system penalised them by about 30% over the old system of measurement.

De Lesseps' new system of measurement was applied in March 1872 and after that time the Porte, the official grantor of the Suez Canal's firmans, received many protests from shipowners using the Canal and from the British government who represented the interests of over 70% of the shipowners. During the second half of 1872 the important step in the Canal dues was taken when the Porte decided to invite the principal maritime powers to send delegates to a conference in Constantinople in order to settle the matter. By December 1872 the conference decided to hold the British "Moorsom" system of measuring gross tonnage capacity but with some modifications to the effect that there should be no discrimination against any user of the Canal. The conference also considered the importance of solving the financial problem of the Canal Company and so it had been decided to allow them to levy a surtax of 3-4 francs per ton, as long as the shipping tonnage using the Suez Canal was less than 2 million tons. After that the surtax would be decreased by 50 centimes for every 100,000 tons increase in traffic, so that the surtax would cease entirely when the tonnage reached 2.6 million tons.

De Lesseps refused to accept the new system of measurement but with regard to the surtax he proposed that it should be maintained until the shareholders had been recouped for their outstanding debt and till the net revenue of the Company reached 8%. Yet later the

Canal Company was compelled (by use of force) to observe the new system of measurement and dues.(19)

The Growth of British Interests in the Canal.

The End of the Financial Troubles of the Canal Company.

In the first two years British traffic constituted 66% and 71% of the total traffic of Suez Canal, followed by French traffic 19% and 12%. The third user was Austria-Hungary whose portions were .4% and 5% in 1870 and 1871 respectively. None of the British mail traffic to and from the East went by the Suez Canal until 1874 because mail contracts provided for overland transit by the Suez-Alexandria railways. After 1874 some of the British mail traffic used the Canal route but not till 1888 were all mails carried through it.

During 1872 Suez Canal traffic rose by 81% and recorded a total of 1.4 million tons. This undoubtedly furnished some bright anticipations for the future of the Canal and consequently the 500f Suez Canal share price rose to 355.13f from its very low level which it had hitherto recorded. It was sometimes argued that the end of the Franco-German war was the main factor in affecting the Canal traffic in 1872. This argument however cannot be supported by any strong evidence. Besides, it was Britain whose traffic rose by 94% in this particular year and thus represented 74% of

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(19) See Wilson, R. The Suez Canal. p.60-63

of the total traffic instead of 71% in 1871. By 1874 the Suez Canal traffic reached 2.4 million tons, of which 1.8m were conducted by British shipowners. The reason for the new prosperous situation was the rapid growth of steam tonnage which definitely espoused the Canal route and abandoned the Cape route in the journey to or from the East. It would be explained later how the opening of the Suez Canal which sailing ships could not use had weighted the scale decisively in the steamship's favour so that their design was improved and their proportion in world shipping tonnage increased. Britain, which was increasing her merchandise fleet of steamships faster than any of her foreign competitors, began to realize how important the Suez Canal route would be to her Eastern trade in the future. A more tolerant attitude was therefore adopted, at last, towards De Lesseps. With the consent of the British government a slower rate of reducing the 3f surtax, over the dues, was conceded to De Lesseps, who in turn agreed to spend a million francs a year on improving the services of the Canal.

By 1875 it was certain that the Canal had passed its worst. In that year the total traffic using the Canal reached approximately 3 million tons and thus the Canal Company was enabled to pay a first dividend of 5% on the Capital Stock, while setting aside funds for

improvement of the waterway. (See Table I for 500f share prices 1870-1923).

The Purchase of the Egyptian Government's Holding of Suez Canal Shares.

By 1875 it seemed certain that Ismail Pasha, the Khedive of Egypt, was threatened with bankruptcy.(20) He had to find between 3-4 million sterling to pay interest due on some of his foreign debt before the 1st December. That was his situation. On previous occasions he had almost exhausted all internal sources of borrowing and external lenders were unwilling to give him any more credit because of their increasing doubt as to his ability to pay them back. The only property which remained unmortgaged now was the 176,602 shares of the Suez Canal held by the Egyptian government and the Khedive started to think of using them for security against a new loan.

By that time the value of these Canal shares was rising continuously and, therefore, two French banking houses, the "Credit Foncier" and the "Societe General", approached the Khedive for their purchase. The British knew about the French proposals and realized the seriousness of the matter, but on the proper solution the Cabinet's opinion was divided. However, on 17th November Disraeli - the Prime Minister - instructed his

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(20) Under the rule of Khedive Ismail the Egyptian public debt increased from £3m. to over £98m., of which £16m. were spent on the Suez Canal. A. Wilson, the Suez Canal, p.48.

TABLE I.

THE SUEZ CANAL 500 fr. SHARE 'PRICES,1870 - 1923.

Year	Price in Francs.	Year	Price in Francs
1870	272.86	1897	3,233.97
1871	208.13	1898	3,583.37
1872	355.13	1899	3,620.95
1873	434.93	1900	3,508.32
1874	422.19	1901	3,713.67
1875	674.05	1902	3,923.57
1876	701.63	1903	3,904.70
1877	677.87	1904	4,209.50
1878	751.73	1905	4,461.14
1879	724.40	1906	4,471.30
1880	1,075.88	1907	4,552.31
1881	1,975.95	1908	4,445.94
1882	2,537.24	1909	4,748.28
1883	2,372.01	1910	5,330.90
1884	1,967.70	1911	5,545.56
1885	2.035.39	1912	6,107.00
1886	2,094.43	1913	5,414.57
1887	2,011.04	1914	4,866.72
1888	2,168.10	1915	4,179.50
1889	2,296.09	1916	4.338.12
1890	2,348.48	1917	4,444.40
1891	2,660.64	1918	4,987.26
1892	2,712.88	1919	5,779.41*
1893	2,674.01	1920	6,951.01*
1894	2.861.82	1921	5,981.87*
1895	3,249.10	1922	6,395.30*
1896	3,347.48	1923	8,636.84

* Depreciated Francs.

Source : The Suez Canal Company, Annual Bulletin.

Consul General in Cairo to do his best to prevent the fall of the Egyptian government's holding of Suez shares into French hands and "to intimate that Her Majesty's Government are disposed to purchase if satisfactory terms can be arranged."

It is true that the Suez Canal had not by that time yielded any immense advantages to the British Eastern trade but as it has been explained, it was the time when many people began to realize that the Canal route could be of a considerable importance sometime in the future. The French attempts to possess more shares in the Suez Canal therefore renewed the fears of Britain that such route might be monopolized by France. (21)

On the 26th of November 1875 the "London Times" conveyed the news of the purchase to the public which received it with enthusiasm. However the opinion of the sophisticated politicians, especially those who deeply believed in a free competitive world, was totally different. If the British shipowners were the main users of the Canal that was because of Britain's superiority at sea and its strength in the world economy. And if Britain would face any unjustifiable actions towards her interests nothing could restore the balance

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(21) In this context Lord Derby, then Secretary of State for Foreign Affairs, told the French Charge d'affairs.. .."In any case..we will do our utmost not to let an undertaking on which so many of our interests depended be monopolized by foreigners"..

except the use of British military power. They wondered, therefore, what would the acquisition of 44% of the Suez Canal Company's shares add to such a situation? They could not imagine any good reason for the purchase of the shares and they viewed it therefore to be a mere involvment in Egypt and in general a revival of the Imperial spirit. On the 27th November the "Economist" devoted the leading article to discussing the financial prospects of the shares and the financial impact of their purchase on the money market in London. They concluded that the operation was quite correct if it was considered merely as a commercial investment. The value of the Suez shares was continuously rising (See Table I.) and although the purchased shares were alienated from their income for 19 years (the Khedive gave up his right to receive their income for such a period as a sort of help to the Canal Company), the Khedive had agreed to pay a 5% annuity to the British government for such a period which would amount to total payment of £2.4 mill. In so far as the money market was concerned the payments of £4 mill. - the purchase price - to the Khedive of Egypt was having a minor impact since they would be used for paying his debts most of which were owed in London or Paris. In their following articles on the subject, the "Economist" gave more attention to the more important question of

the wider economic and political impact of the purchase of the Khedive's shares of the Canal. In fact, by that time it was by no means clear how the Canal's shares acquired by Britain would entail any advantages for her interests East of Suez. There was a doubt whether the holder of a deferred coupon share would have the right to vote in a shareholders' meeting or not. Even if that was put aside, Britain, by the acquisition of 44% of the Canal shares, did not obtain more than 10 votes in the Company's total voting power. The statutes of the company alloted one vote for every 25 shares but no shareholder could have more than 10 votes.

More important was the fact that the stake of the British government in the Canal, particularly after buying shares with deferred dividends, was in conflict with the interests of other shareholders. While the British government would be concerned about Britain's Eastern trade and hence it would endeavour to maintain the Canal in good order, by devoting enough revenue for deepening and widening it, and also by reducing the dues paid by shipowners, the rest of shareholders would reject such a policy since it would give them less profits. In other words, it was the long run policy which Britain would work for, to help the growth of her Eastern trade, that would consequently reduce the annual dividends of

other shareholders and cause their anger. As the majority of the shareholders were French, many commentators predicted that such a situation would eventually raise political troubles between Britain and France, and they wondered whether the price of securing the way to Indian commerce was worth the serious political complication between the two countries!!

In the Parliamentary debate on the purchase of the Suez Canal shares, Gladstone led the opposition against the government. He condemned the British government for having "..awakened the French rivalry in Egypt and so far endangered not secured the route to India". Gladstone also added that the Khedive would not be able sooner or later to pay the annuity to Britain, a matter which would bring Britain into disagreement with him and which would disturb the road to the East much further.

Nevertheless Disraeli succeeded in obtaining Parliament's approval on the purchase of the shares of the Suez Canal. Later, he also succeeded in getting reasonable terms from De Lesseps on the British government's share in the control of the Canal. The British government was given the right to nominate three British directors on the Board of the company, (Later the number of British directors was further increased), besides which the voting rights of the shares which had been acquired, were restored.

Between 1875 and 1882 the British involvment in Egyptian affairs was ever growing. On the surface it was the effect of the interest of Britain as a shareholder in the Canal Company but in fact it was the result of the Suez Canal and its rapidly rising value to the British trade in the East.

In July 1882 the British government alleged that Ahmed Orabi, the Minister of War, who led an armed revolution against the ruling family in Egypt, was intending to block the Canal in order to secure that no foreign country would send them military help by the way of the Suez Canal. On such an excuse British troops moved from Malta and from other British bases near Egypt and occupied it, in order to protect the highway to Britain's Eastern Empire.

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CHAPTER II.

THE GROWTH OF BRITISH TRADE IN THE EAST BEFORE THE OPENING OF THE SUEZ CANAL IN 1869.

APPENDIX (A).

Historical note on the growth of the British Empire and the British Trade in the East.

The Opening of the Suez Canal and Imperial Expansion in the last quarter of the 19th Century.

The Growth of British Trade in the East Before the Opening of the Suez Canal.

Introduction:

Throughout this Chapter, Chapter 4 and Part II in this research project the growth of Britain's trade in the East will be examined through the development of that portion which was conducted with her Eastern Empire(E.E)(1) There are several reasons for making this choice yet most significant of them is the importance which this trade had occupied in Britain's total trade with the East, see Table (2), In fact, by the late 1850's Britain possessed and governed or protected almost all the Eastern territories with which she had traded as independent countries or foreign colonies before the 19th century. The rest of the Eastern world had either fallen under British influence or had a very minor foreign trade by that time.

In this Chapter the development of British trade with E.E. during the fifty years which preceded the opening of the Suez Canal has been reviewed in order

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(1) In this research project British Eastern Empire includes all British Dominions, Crown Colonies and Protectorates lying geographically to the East of Suez. See also Appendix (A).

TABLE (2)

The Importance of the Eastern Colonies to Britain's Eastern Trade.

Figures are given in millions of Pounds Sterling

	1855-59		1860-64		1865-69	
	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.
B.Eastern Colonies	25.5	28.7	49.1	35.2	51.4	39.4
Other Territories East of Suez.	9.2	1.7	12.9	4.2	12.1	9.1
Total	34.7	30.4	62.0	39.4	63.5	48.5

(Basic data obtained from Parliamentary Accounts And Papers)

to estimate the importance of the main factors which affected this development before as well as after 1869. However, the attention in this review has been especially devoted to the last twenty five years or so prior to 1869. During that period a new trade policy, i.e., free trade, was officially adopted by Britain and all her Crown colonies. Free trade policy was maintained also for another 60 years after the opening of the Canal and the growth of Britain's trade with her Empire was often interpreted in its light. It is therefore important to us to assess the influence which free trade had on the growth of Britain's trade with her E.E. before 1869. Indeed without going through this

step it will not be possible to single out the role played by the opening of the Canal in the growth of that particular trade.

It must be recognised that the extension of the British rule in the East, itself, had exerted a powerful influence on the British E.E. trade (i.e., Britain's trade with her Eastern Dominions and colonies) before and after 1869. Doubtless with British administration and the application of British laws in the colonies, British merchants felt sufficiently secure to expand their business and to develop the size of the inter imperial trade. Moreover they were able (in contrast with the native merchants of the colonies) to manage and finance large scale trade between home and the colonies. Capital flowed from Britain into the colonies easily to build up a new profitable trade or to assist in beginning new plantations or to construct roads and canals. British investors felt that their money should be as safe in the colonies as it was in Britain.(2) Furthermore the British government itself assisted in the colonial development through grants and loans. It must be expected that the continuing effect

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(2) Nash, R.L. "A Short Inquiry into the Nature of our Profitable Investment" - London 1881.

of all these economic forces which were naturally fostered by British imperialism had tended always to provide for automatic growth in the British E.E. trade. However, the period between 1757 and 1833 was characterised by mal-administration of India. The reason for this was that the British government had expected that the East India Company would be able to direct successfully the political life of India as well as its original commercial interests. That proved to be impossible in a period full of wars, civil disorders and constant colonial expansion. The Company was losing gradually its interest in developing the colonial trade in India and other British Eastern territories, as a sufficient revenue was guaranteed to it through the administrative task. In 1833 the monopoly of the East India Company was, therefore, broken completely, and this fact subsequently tended to stimulate the growth of British Indian trade.(3)

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(3) "A company that maintained armies and retailed tea, that carried a sword in one hand and a ledger in the other, was a contradiction, and had she traded with success would have been a prodigy. It was impossible for her to pay that attention to details that is indispensable to the carrying on of commerce with advantage." MacCulloch, Dictionary of Commerce, p.535 (1837). However a complete revision of the British colonial policy and administration in India was not entirely felt until after the Indian Mutiny, when a more energetic and acceptable policy with regard to the economic development of India was inaugurated. See Strachey, J., The End of Empire, p.54.

Imports of the principal articles from India into Britain changed as follows, in the ten years following the cessation of the East India Company:(4)

	1833.	1843.
Cotton (in mill. lbs.)	32	65
Linseed (in bushels)	2,163	64,024
Rice (in cwts.)	179,370	364,689
Indigo (mill. lbs.)	6.3	5.9
Pepper (mill. lbs.)	7.2	3.6
Sheep's wool (mill. lbs.)	3,721	1,916,129
Coffee (including Ceylon) (in mill. lbs.)	5.7	13.8

Preferential tariff agreements between Britain and her Empire had also a significant role in the development of the inter-imperial trade until the 1840's For example,-from 1825 to 1842 the duties on coffee coming from British colonies had been 6d, 9d. or 1/- per lb., according to the particular group of possessions from which it was imported - while foreign coffee was charged 1/3d. per lb. From 1787 to the 1840's white sugar that came from British plantations was charged £1.9/- per cwt. while that which came from other foreign sources had to

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(4) Ref: Porter, Progress of Nation, p.750, 2nd ed., 184 7, or Knowles, The Economic Development of the British Overseas Empire, p.307. See also this last reference p.301-2,304-12.

pay £2.5.6d. per cwt. "By means of the preferential rate accorded to raw sugar imported from British possessions raw sugar from all other sources had been excluded from the country until 1844.(5) Similarly in the British Colonies, the imports of goods of foreign origin - non-imperial produce -were either prohibited or discouraged by high duties while British produce and manufacture either entered free or at very low duty. Very important also was the imperial preference that existed with regard to the carrying of goods between the colonies and Britain and other foreign countries.

Navigation acts, customs regulations, trade policies and the charters of colonial companies all combined to ensure that British, or colonial ships, should be used in carrying the inter-imperial trade. They also provided that foreign countries would not trade directly with the colonies by necessitating that almost all the products of the colonies had to be brought first to Britain and there unloaded before they could be redespatched to their final destination. Britain's imports from her colonies had therefore been rising to satisfy not only home requirements but also those of other foreign countries. Similarly whenever the

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(5) Quotation - Parliamentary Papers 1903 LXVII -"Notes on former preferential duties in the U.K." (p.449 in this reference).

colonies needed any foreign produce or manufactured item it was Britain which first procured it for them. Hence British entrepôt trade between her colonies and the rest of the world was steadily growing throughout.

During the 1830's with a rapid development of the Free Trade movement in Britain, the atmosphere was becoming increasingly unfavourable to imperial preference and to the colonies themselves.Colonial policy was frequently attacked on the grounds that Britain could have pursued her trade with the colonies without any need to rule them and involve herself in expenditure on wars and civil disorders inside them. Britain was the chief seller in the markets of her colonies because of her ability to produce cheaply the manufactured goods which were demanded. It was also claimed that the expenditures on the colonies could not be justified if its intention was meant solely to secure the supply of the Colonial produce as it was possible for Britain to supply herself cheaply with similar produce from elsewhere. Furthermore British colonies were unable, by that time, to supply more than limited amounts of Britain's increasing requirements of foodstuffs and raw materials. As regards wheat and raw cotton, for instance, although British North America and India supplied the mother country with a proportion of her requirements the major part came from other foreign

countries, such as U.S.A. for wheat and cotton and German States and Russia for wheat. Also in the case of raw wool imports the largest amounts, by that time, were supplied by the German states rather than Australia, India and South Africa. Imperial preference was viewed by the free trader therefore as being based only on a narrow nationalistic outlook, resulting in nothing but the restriction of British foreign trade to the limited circle of Colonial trade.

With the triumph of the policy of Free Trade in the forties the bulk of Colonial preference was gradually swept away. By 1851 Imperial preference was reduced to nil. Navigation Acts were also abolished in 1849 and foreigners were now free to trade directly with, and participate in the shipping traffic of, the British Empire.

With the dawn of free trade policy the Australasian colonies, of the Eastern Empire, were given self-government and enabled to form their own trading policy. Meanwhile other British colonies in the East were forced to follow the trade policy on which the mother country had decided.

The Development of Britain's Trade with her Eastern Empire. from the Adoption of Free Trade till the Opening of the Suez Canal.(6)

I. Imports.

A. - Trade Development Affected by Factors Other than Trade Policy.

Of the main articles which Britain imported from her Eastern Empire textiles raw materials were not favoured by any preferential duties. Imports of the cheap Australian wool started to rise very rapidly during

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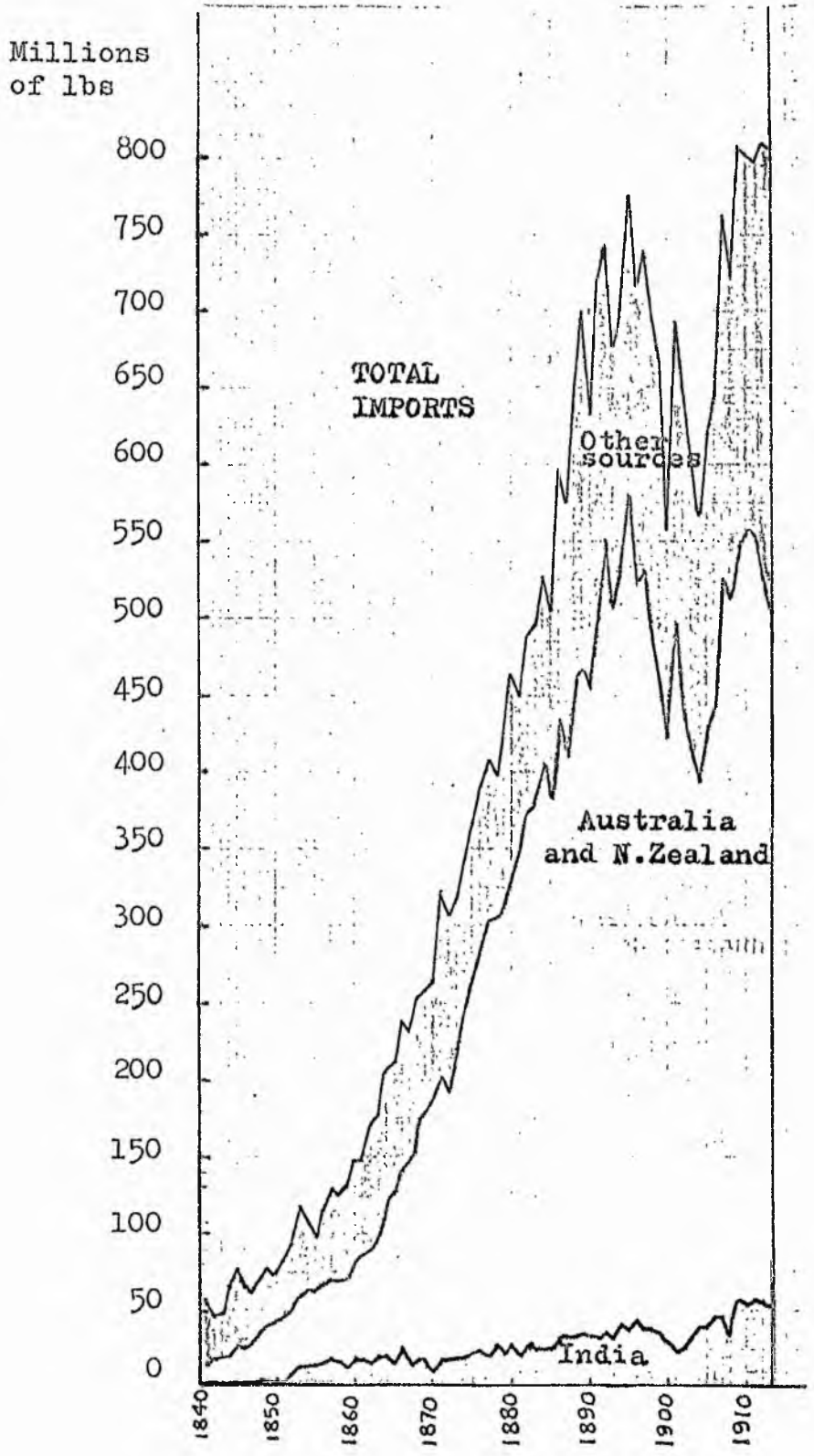
(6) In the second half of the 19th century and in the early years of the 20th, much was said and written on the serious influence of the trade policy of various foreign countries and British Dominions and Colonies on the development of Britain's trade with them. "The free traders have claimed, as a result of the free trade policy, the total movement of trade which has shown on the whole a strong upward tendency, and specially the periods of great prosperity, explaining the periods of depression by other causes outside the sphere of trade policy. Their opponents, on the other hand, have made free trade answerable for the periods of depression, and attributed those of prosperity to other causes. Our discussion must have already shown that both conceptions are false, and rest on an exaggerated estimate of what a trade policy can do." Fuchs, C.J. The Trade Policy of Great Britain and her Colonies since 1860, p.159. "The discussion in the following pages of this Chapter is, partly, planned so as to contribute towards a general understanding of the possible effect of the trade policy on Britain's trade with her E.E. before 1869. The discussion in Chapter 4 will show that the revolution of Eastern Transport which followed the opening of the Canal and the substitution of steamship for sailing ship, had significantly changed the effect of the trade policy of various parts of E.E., on their trade with Britain.

and after the 1830's. By the early forties the chief suppliers of that fibre to Britain were the German States, followed by Australasia then by South America and India. The Germans by then supplied a quantity of wool which was larger than that supplied by both Australasia and India put together. Diagram (2) shows clearly how that situation changed in the late 1840's, so that E.E., with the largest quantity coming from Australia, became the most important source for supplying Britain with wool. This was due to the success which the Australians achieved in raising their raw wool output faster than other nations and at lower costs.

Imports of cotton from India started to rise following the American War of 1812 when that war cut off the supply of cotton from U.S.A. A certain limitation, however, was imposed on the growth of that trade since India could only produce the short stapled grades of cotton. Nevertheless, there was a steady rise in the imports of cotton from India until the late 1860's because of the increasing portion which Britain re-exported to the Europeans who were building up their textiles industry. Again during the American Civil War of the 1860's the British cotton industry became short of raw cotton. Britain therefore had to encourage the expansion of cotton plantations in India and to increase

DIAGRAM (2).

IMPORTS OF RAW WOOL INTO U.K (1840 - 1913)



her imports from them. See Diagram (3) on the expansion of cotton imports from India and the rest of the Eastern colonies (over 95% was supplied by India only) between 1854 and 1869. The quinquenial averages of cotton imports from India into Britain during 1855-59, 1860-64 and 1865-69 were 1.6 millions cwt., 3.5 millions cwt., and 4.6 millions cwt., respectively.

The high price of raw cotton during that period encouraged a very rapid increase in the cotton area in Egypt. Egyptian cotton proved to be long stapled and of a quality better than the American variety and so was purchased by Britain and other European countries in addition to the Indian cotton. After the cotton famine passed, Britain resorted again to the purchase of American cotton but she also began to buy an increasing quantity of Egyptian cotton which meant correspondingly smaller imports of Indian cotton. This change must be considered when an explanation is sought for the decline in British imports of Indian cotton after the 1860's.

Jute had first been imported from India in 1795, as a substitute for hemp which was mainly brought in from Russia, but for technical reasons it was impossible to make any use of it. In 1833 Dundee's mills worked this new fibre successfully for bags and sacks. In the years that followed this industry was expanded significantly in Scotland as the machinery used for spinning

DIAGRAM (3)

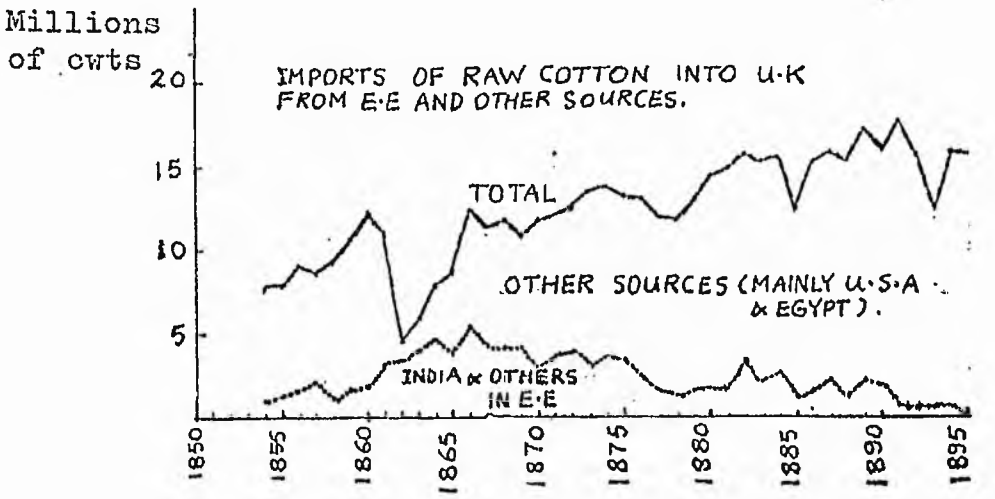
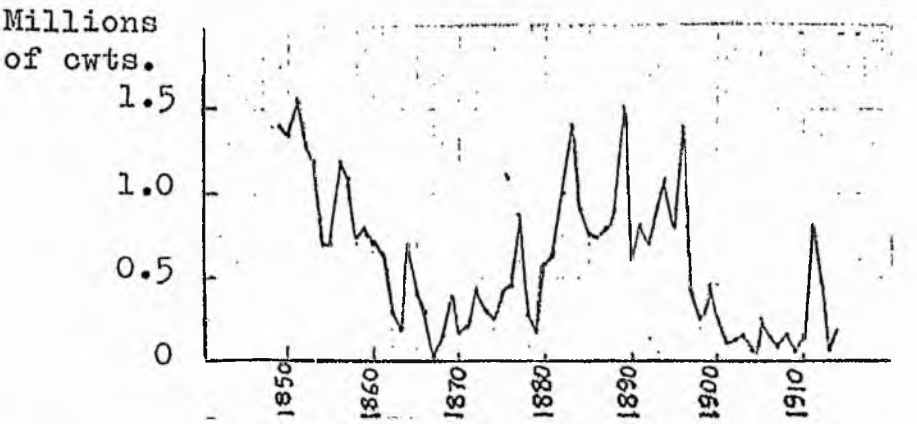
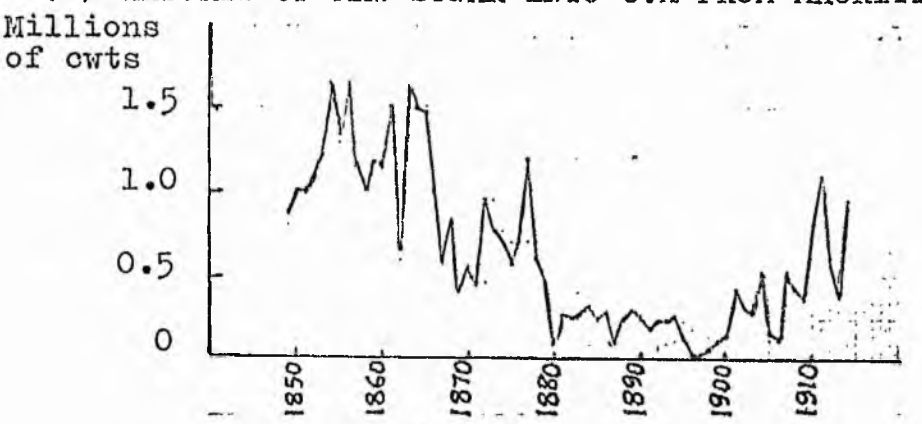


DIAGRAM (4).

(a) IMPORTS OF RAW SUGAR INTO U.K FROM INDIA



(b) IMPORTS OF RAW SUGAR INTO U.K FROM MAURITIUS.



jute was developing technically. During the 1850's and the 1860's importation of Indian jute was further stimulated as the demand for bags and sacks was growing rapidly with the growth of grain trade in the Western World.

An examination of the British statistics shows that the quantity of silk imported into Britain from India declined drastically during the 1850's and the 1860's. The contemporary writers explained this decline as being due to the growth of French imports of silk from India during the period. It was true that France started to increase her direct imports of Indian silk after the adoption of free trade and the building of the Suez-Alexandria railway. However this was not the correct explanation. In fact the decline of Indian silk coming into Britain, particularly since the mid-1850's, was really only an apparent decline due to a failure on the part of the official statistics to place under the Indian account the large part of the silk trade which then began to depend on the Egyptian overland route. In Table 3 the real situation of the Indian exports of silk to Britain can be rightly seen.

TABLE (3)

British Imports of "Raw Silk" which came from India and Other Places East of Suez by the Suez Overland Route.

Year.	Million lbs.	Year	Million lbs
1849	.041	1864	3.401
1850	.204	1865	5.054
1851	.242	1866	3.406
1852	.911	1867	3.850
1853	1.863	1868	5.175
1854	1.540	1869	4.265
1855	.773	1870	4.022
1856	2.514	1871	4.667
1857	4.486	1872	2.489
1858	3.075	1873	.901
1959	5.459	1874	.149
1860	6.343	1875	.064
1861	4.900	1876	.
1862	5.435	1877	.
1863	4.780		

These figures were given in the accounts relating to the trade of U.K. with Egypt but they were specified as a transit trade from India and China (including Hong Kong) and Japan.

These figures can be used to support the fact that the volume of Britain's Eastern trade which came via the Suez overland route had grown only after the completion of the Suez-Alexandria railway. But as it has already been explained this transit trade was limited to a few articles, i.e., the lighter and the costlier; and when by November 1869 the Canal was cut, it started to decline until it ceased entirely to use the overland route after the middle of 1870's. (See Chapter 4).

Indian tea was also one of the articles which had not received any preferential treatment during the period of protectionism. Tea planting had only been commenced in India - in Assam - in 1834 and for years it showed no commercial success. Perhaps this was mainly due to the competition of the cheap China tea which was habitually preferred on the British market. In 1854 India exported 386,221 lbs of tea to Britain while the total quantity of tea imported in that year was 85,792,032 lbs. In the years that followed the British market absorbed steadily increasing amounts of Indian tea whose taste and strength British consumers began to admire. By 1869 India exported to Britain 11.241 million lbs of tea. However when this quantity is compared with total imports of tea in the same year 139.223 million lbs, it will be realized that the competitive position of the Indian tea in the British market was still relatively weak.

B. - <u>The Effects of the Removal of Imperial Preference</u>.

The rest of the main articles which Britain imported from her E.E. were spices, oil seeds, indigo, rice, skins and hides, coffee and sugar. All these articles were given preferential treatment in the British customs before the adoption of free trade. How the imports of these commodities were affected by the new trade policy can not easily be judged in some cases while the

influence in other cases was quite evident. Colonial sugar had for long been strongly protected in the British market from the competition of foreign grown sugar. In 1846 the British government decided to lower the import duty on the non-colonial sugar and in the years that followed a successive reduction in this duty was brought about. By July 1851 import duty on all sugar coming to Britain from colonial and non-colonial plantations was fixed at one rate. It should be borne in mind that India's sugar exports to Britain were only commenced in the 1830's after the prohibition of the slave trade had affected the slave grown sugar. Cheap labour was available in India and Britain was offering a strong preference to the colonial sugar in her market.

In the years that followed 1846 the competition of the slave grown sugar was so powerful that it had lowered sugar prices considerably. Diagram (4a) shows how imports of sugar from India were subsequently affected. The sugar trade of Mauritius was older and larger than that of India. Yet as Mauritius exports of sugar to Britain were considerably assisted by protectionism they were bound to be affected also by free trade measures, (Diagram (4b)). British statistics also show that the quantity of indigo imported from India during the quinquennial periods 1855-64 had remained constant at an average of .06 million cwts. and then

declined to .05 million cwts. in 1865-69. Using the statistical evidence available it can be estimated that re-exports of indigo out of these quantities were .05 million cwts. per annum during 1855-59 and then the average declined to .04 million cwts. per annum during 1860-64. The latter average was also held during 1865-69. The change in Britain's re-exports of indigo could be accounted for by the development of the Suez-Alexandria route since the mid-fifties which facilitated the trade in lighter and costlier articles. This, in combination with the free trade policy, helped the growth of the direct trade in the case of indigo between India and some European countries. Nevertheless the low average of net imports of indigo during the sixties still needs some explanation. This might be found in the relative decline in the production of cotton textiles in Britain during the cotton famine which certainly affected the demand for indigo which was mainly used as a cotton dyestuff.

For most of the other articles which the E.E. supplied to Britain we would find that their trade figures showed a continuous rise throughout the period.

Britain's imports from E.E. had largely increased during the period under review and in particular during the early 1860's because of the dramatic rise of cotton

imports from India (see Table (4)).

TABLE (4)

Declared Value of British Imports (for home consumption and Re-Exports) from E.E. in millions of Pounds Sterling.

	5 Years' Average		
	1855-59	1860-64	1865-69
India	15.8	34,4	32.6
Straits Settlements	.8	1.9	1.9
Ceylon	1.5	2.8	3.5
Mauritius	1.9	1.6	1.1
Hong Kong	.1	.9	.4
Australia) New Zealand)	5.4	7.5	11.9

In 1864 imports from E.E. totalled £72.1 mil., a level which was not reached again before 1882. Throughout, India remained the largest source of raw materials, in E.E., for Britain. For example, the imports from India totalled £12.7 mil., and £33.3 mil., out of £21.0 mil., and £52.6 mil., total British imports from E.E. in 1855 and 1869 respectively. Australasia followed India in importance. With the steady development of wool imports, total imports from Australasia rose from £4.5 mil. in 1855 to £12.2 mil. in 1869. During the early 1850's and till 1857 Mauritius followed India and Australasia in importance, yet by the late 1860's its situation had deteriorated to be the fifth among various parts of E.E. That was partly attributed to the decline in sugar imports from this Colony and partly because of

the rapid growth of Britain's imports from Ceylon and the Straits Settlements. See also Table No.(4) for the growth of imports from E.E. between 1855 and 1869.

Against the expectations of the protectionists the adoption of free trade policy had not in itself exerted any material influence upon Britain's share in the export trade of E.E. Until 1869, and in spite of free trade, European countries, rather than Britain, were unable to develop their direct imports from E.E. The share of European countries in Indian exports in 1870 was only about 7%, while in the case of Australia such share did not even reach 2% in the respective year. See also the share of European countries and U.S. in the export trade of New Zealand, the Straits Settlements, Ceylon and Mauritius in 1870, in the same Table.

European countries maintained, therefore, their dependence on Britain for the Eastern goods which they required. The best example to give here would be the situation of the cotton trade during the sixties when the supply of American cotton was cut off from Britain and the continent of Europe. British merchants without any sort of imperial preference given to them in India were carrying almost the whole cotton produce of the colony and re-exporting a large proportion to the European countries, see Table (5).

In fact Britain not only maintained her re-export trade of E.E's produce but had further developed it considerably during the period under review. The figures which it was possible to obtain in estimating the value of British re-exports of E.E's produce can well support this conclusion. See Table (6)[7]

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(7) Method used in estimating the values of re-exports of E.E's produce is explained in Appendix C - Chapter 4.

TABLE (5).

Per cent of General Imports of Cotton.

Year	%	
1855	12	
1856	13	
1857	12	
1858	13	
1859	12	
1860	15	
1861	22	
1862	43	The Cotton Famine
1863	36	Imports mainly
1864	27	came from India.
1865	28	
1866	25	
1867	24	
1868	22	
1869	20	
1870	15	

Per cent = $\frac{\text{Declared Value of Cotton Re-exports}}{\text{Declared Value of Cotton Imports}}$

The data are compiled from statistical Abstract of U.K. published annually in Parliamentary Papers for the respective years.

TABLE (6)

Re-Exports of Eastern Empire Produce. Estimated *

Year	Re-Exp. £ m.	% of Gen. Imp.
1855	6.2	29.4
1856	6.6	23.4
1857	7.0	24.0
1858	6.2	25.3
1859	7.6	29.7
1860	8.7	32.3
1861	12.2	34.8
1862	18.4	38.8
1863	24.3	37.8
1864	22.4	31.0
1865	20.5	36.8
1866	16.7	30.5
1867	15.3	34.7
1868	17.3	34.7
1869	17.0	32.3
1870	15.0	32.3
1871	19.0	38.5

* See explanation for the method used in estimating these figures in Appendix C - Chapter 4.

II. - The Development of British Exports to E.E.(1855-1869).

During the period in question, main articles in British exports to E.E., arranged by importance, consisted of cotton, piece goods, cotton yarn, apparel and haberdashery, iron and steel, hardwares and cutlery, machinery and coal. It was in the first two of these articles that the growth had been most marked throughout the period, with the exception of the early 1860's. Considering the period 1855-1869 we would find that exports of cotton piece goods to E.E. increased from 500.988 mil. yards in 1855 to 1,071.632 mil. yards in 1859. During the first half of the 1860's the drastic increase in raw cotton prices was immediately reflected in the prices of the finished manufacture, and consequently exports to E.E. fell to 524,591 mil. yards in 1864. With the gradual return of the American cotton to the world market, export prices of British cottons declined from about 6d. per yard in 1864 to about 4d. per yard in 1868, and, with that, exports of cotton goods to E.E. rose once again. Yet, the previous level of 1859 was not recovered before 1871. Throughout, India represented the largest market for British cotton goods. Out of 1859's exports she took 886,605 mil. yards and in 1869 she obtained 626,391 mil. yards out of 808.787 mil. yards of cotton goods exported to E.E. No doubt

the reduction in duties in India, to accomplish Free Trade, contributed greatly to this large increase in the imports of British cottons into India.(8) Exports of cotton yarn to E.E. followed more or less the same trend. Yet prices of yarn did not decline as fast as those of the piece goods, and thus we find that exports of yarn in 1869 were still considerably under their level of 1859, i.e., 29.910 mil. lbs in 1869 compared with 53.055 mil. lbs in 1859. Again, India was the largest consumer of cotton yarn, as she obtained 39.656 mil. lbs of British yarn in 1859 and 22.410 mil. lbs in 1869.

Throughout, Australasian market represented the largest market for British apparel and haberdashery, and then the Indian market followed in importance. Exports of apparel and haberdashery to Australia increased in value from £402,460 in 1849 to £1.871 mil. in 1859, but subsequently grew at a slower rate, most probably owing to the increase in the import duties in some of the states. To New Zealand, exports of

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(8) No doubt the adoption of free trade policy in India had hastened the destruction of her old hand crafts. At the same time, under the new circumstances, India was not really given any chance to build up immediately, and for many years, modern textiles factories since her market became widely open to the strong competition of Manchester's cotton industry.

apparel increased from £27,413 in 1849 to £491,635 in 1866 and then the rate of growth was slightly slowed down in the three years ending with 1869. Exports of apparel to India, a free trading colony, increased throughout the period but at a slower rate than that of Australasia. They grew from £116,014 in 1849 to £248,828 in 1864 and then they declined to £124,185 in 1869. In the rest of E.E. the increase in exports of apparel was most remarkable except in the last few years of the period under review.(9)

Exports of iron and steel to India, grew from 35,025 tons in 1849, to 201,577 tons in 1860, and then they declined after that and were only 33,485 tons in 1864. Since then they began to rise once again, but by 1869 they were still 5,767 tons lower than they were at 1860. Exports of British iron and steel to Australia and New Zealand grew almost without any interruption throughout, except during the early 1860's, and totalled 116,632 tons in 1869. To the rest of E.E., Britain exported very small amounts, compared with those which

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(9) No statistical data could be obtained on the quantities or the export prices of apparel and haberdashery. Thus we can not determine whether the decline in exports of these particular manufactures to E.E. in the late 1860's was a result of a fall in quantity or in price.

had been exported to India or to Australasia.(10) Exports of iron and steel to the last two mentioned parts of E.E. were in fact very closely correlated to the building of railways which had been carried in their inlands at a fast rate during the 1850's and then was slowed down in the 1860's. Yet, the particularly lower figures of exports of British iron and steel to India, Australasia and the rest of E.E., during the early 1860's was probably due, also, to the rise in average export prices.

British exports of machinery to India were rising with the development of cotton mills around Bombay, jute mills around Calcutta, rice, flour and oil mills in other parts of the country, during the late 1850's and the early 1860's. Between 1855 and 1869 exports of machinery to India averaged about £.481 mil. per annum. Considering the period in question into quinquenna, we shall find that the highest exports of machinery to India were made during 1859-1863 when the annual exports averaged £.674 mil. In Australasia, exports of machinery was closely linked with the

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(10) In 1869, Britain exported to E.E. 335,771 tons of iron and steel goods, out of them 312,442 were taken by India and Australasia and 23,329 tons were distributed in the rest of E.E., Hong Kong and the Straits Settlements, both were entrepot trade centres, had 17,127 tons.

willingness of the self-governing colonies to build their own industries. During the fifteen years 1855-1869 exports of machinery to Australasia averaged £.211 per annum, which was very high when compared with the above figure of India, if the size of population in each of these two parts of E.E. was considered.

The value of British exports to India, Ceylon and the Straits Settlements rose slightly from £6.5 mil. in 1842-46 to £6.6 mil. in 1847-51, and then it rose at a faster rate to reach £15.9 mil. in 1855-59, and £23.3 mil. in 1865-69. Out of the former figures the share of India was £14.4 mil. and £20.6 mil. in 1855-59 and 1865-69, respectively. In Australasia, Britain developed her exports from £1.1 millions in 1842-46 to £11.2 mil. in 1855-59 and then to £13.3 mil. in 1865-69. Exports to Mauritius were, generally speaking, growing at a much slower rate, and furthermore by 1865-69 they had declined and averaged £.5 mil. which was lower by £.1 mil. than the average of 1860-64. Exports to Hong Kong although not growing steadily, increased from £.4 mil. in 1855 to £2.3 mil. in 1869. See also Table (7).

Thus throughout the period under review, and in spite of the dramatic growth in exports to Australasia, India represented the largest market for British manufactures in E.E.

TABLE (7)

Declared Value of British Exports (Home and Foreign Produce) to Eastern Empire, in Millions of Pounds Sterling.

	5 Years' Average		Years			5 Years' Average		
	1842 - 46	1847 - 51	1852	1853	1854	1855 - 59	1860 - 64	1865 - 69
India						14.4	18.4	20.6
Straits Settlements	6.5	6.6	7.4	8.2	10.0	1.0	1.3	1.8
Ceylon						.5	.8	.9
Mauritius	.3	.2	.2	.4	.4	.5	.6	.5
Hong Kong	x	x	x	x	x	1.0	1.8	2.6
Australasia	1.1	2.1	4.2	14.5	11.9	11.2	12.3	13.3

x Unspecified in Official Statistics. Included with China.

Source : Basic data compiled from Parliamentary Accounts And Papers.

Until 1869, and in spite of the abandonment of imperial preference, European countries, other than Britain, were unable to develop their exports to E.E. The relative importance of European countries in the import trade of E.E. was even less significant than the situation which they had obtained in its exports. In 1870, only 1.5% of Indian imports, 1.6% of Australian imports, 3.4% of the Strait's imports and none of New Zealand's imports were obtained from the continent of Europe. In the same year, 64.9% of Indian imports, 64% of Australian imports, 58% of New Zealand's imports and 25.6% of the Straits Settlements's imports were obtained from Britain. The growth of British re-exports of foreign produce, mainly from Europe,(11) could also be taken to indicate that the continent of Europe had to rely, throughout, on Britain to sell their manufactures in E.E. India's imports of foreign produce; and manufactures through the mother country, although almost stagnant in the early 1860's, were in 1865-69 higher by 44% than they had been in 1855-59. Re-exports of foreign produce and manufactures to the Straits and to Hong-Kong, both entrepot centres, had grown at a faster rate than in the case of India. However, in

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(11) See Foot Note No. 30, Chapter 4.

the case of Australasia, re-exports of foreign manufactures declined from about £1.8 mil. in 1856 to about £1 mil. in 1869.

Conclusions:

It has been shown that, during the period under review, Britain had developed her imports from E.E. at a considerable rate. When these imports were broken down into imports for home consumption and others for re-exports, we saw that the growth of the latter portion tended always to be faster. The growth of re-exports of E.E's produce was also considerable when compared with that of British re-export trade in general. Britain's re-exports which were originally obtained from E.E. represented 29.5% and 36.1% of her re-export trade in 1855 and 1869 respectively.

As regards exports, it has also been shown that Britain had succeeded in expanding her market in various parts of E.E. The increase was most marked in the case of Australasia, in spite of the belief in protectionism. This increase was made possible by the rapid rise in the income of the Australasian colonies, as their exports, particularly to Britain, were progressively growing and also as a result of the discovery of gold mines. In addition to that

it should be borne in mind that the loans and grants which these colonies obtained had contributed in raising their imports from Britain.

We have also seen that Britain was able to maintain her monopolistic share in the foreign trade of various parts in her E.E., in spite of the abandonment of imperial preference and Navigation Acts. In fact, most of the European countries were restricted in their direct trade with the East by the long journey around the Cape of Good Hope and by their small sea carrying capacity. At the same time, as has previously been explained, Britain was favoured by her geographical situation and by her maritime superiority, in her trade with the East. Thus, the abandonment of imperial preference could not change the role which Britain played in the foreign trade of E.E. On the contrary, under such transport conditions and with the influence of free trade policy (not only in E.E. but also in Europe) Britain had managed to develop rapidly her re-export trade between E.E. and Europe.

Nevertheless, the non-existence of the problem of transport for the British merchants trading with the East, in the centuries that separated the discovery of the Cape route from the opening of the Suez Canal, must not preclude the probability that transport difficulties had limited the rate of growth and the

ultimate size of the Eastern trade. Freight charges for the Eastern journey were quite heavy and in order to overcome their handicap the trading ports in the East had to offer their wares at a very low price. Hence, for example, India or Australia could not export wheat to Britain because their export prices had to be kept very low indeed to overcome both heavy freight charges and on arrival to compete in the British market with the American and European wheat. The growth in the trading of cheap textile raw materials was also limited by the same factor. In addition to that, it must be borne in mind that the long time spent in the journey from the East had prohibited all trade in the fresh food stuffs of E.E.

Transport difficulties had also limited the growth of the export trade to the East, as will be shown in the discussion of Chapter 4.

APPENDIX (A)

HISTORICAL NOTE ON THE GROWTH OF THE BRITISH EMPIRE AND THE BRITISH TRADE IN THE EAST.

THE OPENING OF THE SUEZ CANAL AND IMPERIAL EXPANSION IN THE LAST QUARTER OF THE 19th CENTURY.

The real foundation of the British trade in the East goes back to 1600 when the East India Company was established. The Company was given an absolute monopoly of British trade in all the lands situated between the Cape of Good Hope and Cape Horn. The chief categories of British imports from India consisted mainly of indigo, a dye stuff which was required by the textile industry, raw silk and silk piece goods, ivory, salt petre and spices. Cotton goods were also carried by the merchants of the Company from India partly to be exchanged for spices from the Spice Islands and for tea and silk goods from China, and partly for British and European consumption.

During the first half of the 18th century the position of the British traders in India was becoming increasingly insecure because of the breaking up of the Moghul Empire and the increasing activity of the French. By that time the British were conducting the largest part of the trade between the Eastern and Western hemispheres and they felt that force

must be used to secure their present and future business interests. The victory achieved at the battle of Plassey in 1757 was the starting point in the history of the British rule in the East.

The major extension of the British influence in India, and generally in the East, began during the Napoleonic wars. It was again a measure attempting to secure British trade therein against the rivalry of the French. By 1805 North and West Bengal, Mysore, Tanjore, Surat, and the Carnatic were all possessed by Britain. Furthermore, Ceylon, a Dutch Colony, and Mauritius, a French Colony, were added to the British Empire in 1810. Ceylon's trade consisted mainly of spices, oilseeds and coffee, while Mauritius owed its importance to its geographical situation as a port of call on the way to India and also because of its sugar trade.

In 1819, Sir S. Raffles purchased "Singapore" for the East India Company from the ruler of Johore and in the following years steady British expansion was taking place in the Malay Peninsula. Singapore was known for its excellent harbour and its entrepot trade. Singapore with other islands in the Malay Peninsula, specified together later as "the Straits Settlements" were supplying Britain with large quantities of various kinds of spices.

In 1839, Aden was conquered by Britain. Arabic gum and small amounts of frankincence, ivory and coffee came from that part of the Empire. During the 1840's Hong Kong, Sarawak and Labuan were added to the Eastern Empire. The importance of Hong Kong was due to its being a depot for the export of cheap Chinese labour and an outlet for the trade of Southern China.

The history of the British colonization of Australasia is of a particular interest. In the beginning the early settlements in New South Wales and Tasmania were arranged by the British government and consisted of convicts and their guards. For several years the government incurred the costs of these settlements and gained no profits until "the island penetration began in New South Wales when the gap through the mountains on to the plains was discovered in 1813, which enabled the development of millions of sheep in the interior" (P.12. Economic Development of the Overseas Empire. L.C. Knowles). After this economic feature of Australasia emerged more British people found an incentive to migrate into the new lands and the business of sheep breeding was further developed. It can be said that only then the real establishment of Australasia had begun.

Further expansion of the British rule in India came in the second quarter of the 19th century and continued until the end of the 1850's. During that decade Assam, Sind, Punjab and Oudh were all conquered and added considerably to the British inperial trade in the East.

That, then, was the situation of the British Eastern Empire before the building of the Suez Canal. The opening of the Canal not only altered the trade routes to the East but also changed the economic importance of the whole Eastern hemisphere. As she had acquired Cape Town, St. Helena, Ascension and Mauritius, mainly because they were the most important ports of call on the way to India, Britain was anxious now to possess new colonies on the Eastern Coast of Africa in order to guard the new highway to her Empire in the East. Thus Egypt was conquered - as it has been described in Chapter 1. Later the Sudan and Somaliland were also taken by Britain. However, setting aside the case of Egypt the extension of the British rule on the Eastern Coast of Africa was not solely desired for guarding the Eastern trade. The great shortening of the route - from Britain - to some countries such as Sudan, Somaliland, Zanzibar and Kenya and the fact that they are now situated on the way to the rest of the East gave a powerful

stimulus and a new value to their foreign trade. No doubt also the expectations of finding rich mineral resources in their lands had enhanced their desirability to the British imperialist. The rise of the imperial spirit in Europe must also be considered when examining Britain's imperial policy in the East - after 1870. The opening up of a short route to the Eastern markets had certainly attracted the attention of the European countries, - also, towards the region situated East of Suez (and particularly to Eastern Africa which had not been occupied yet by any power by that time). This rise of imperialistic thinking in Europe succeeded in further arousing the imperial spirit inside Britain in spite of the belief in a free trade policy. It was realized that if she did not want these tropical areas in the East, somebody else did. At the peak of the European imperial expansion Britain decided to be the most active power and in carving up the African lands in the last quarter of the 19th century she added more glittering jewels to her Empire than any other European participant. (See W. Stern, British Trade between 1875-1914, p.172-3)

The opening of the Suez Canal, with the help of other economic forces which revolutionized the conditions of transport and communications between the East and the West, had also exerted indirect influences on

British colonial expansion in the interior of their Eastern colonies. During the 19th century the British colonial growth depended mainly on moving inland from a coast line or a port to control the hinterland. This process was considerably hastened and secured in the last quarter of the 19th century by the rapid construction of railways. A correlation between railway construction in the British Eastern colonies during that period and the expansion of their foreign trade consequent upon the opening of the Canal is quite apparent and is demonstrated in Chapter 4, Part I by relevant statistics. As regards Australia and New Zealand, the influence of the cutting of the Suez Canal on the amount of British emigration is also quite clear. Doubtless cheap transport and a more convenient journey played a role in increasing the number of the British emigrants to the new lands in the East. The following is a quotation from a letter written by the manager of the Union Bank of Australia in Sydney in June 1885....."The immigration department here also utilises the Canal by having government emigrants forwarded to this colony by large steam vessels through the Suez Canal, instead of the long sea route via the Cape in sailing ships to the great benefit in healthy comfort and morality to the emigrants".

(This quotation is from Rabino, J. "The Statistical Story of the Suez Canal", Journal of Royal Statis. Soc. 1887). See also the accompanying Table for immigration to Australia and New Zealand via the Suez Canal.

TABLE A-1

Immigration to Australia and New Zealand via the Suez Canal.

1878	3,509
1879	6,865
1880	5,367
1881	9,770
1882	20,862
1883	31,420
1884	32,373
1885	33,288
1886	34,218

From Suez Canal Statistics.

CHAPTER III

THE OPENING OF THE SUEZ CANAL AND THE REVOLUTION OF EASTERN TRANSPORT.

SECTION I;

THE INFLUENCE OF THE OPENING OF THE SUEZ CANAL UPON THE COST OF EASTERN TRANSPORT.

SECTION II;

THE COST OF USING THE SUEZ CANAL.

APPENDIX B;

STATISTICAL TABLES.

Section I;

The Influence of the Opening of the Suez Canal upon The Cost of the Eastern Voyage. (1869-1913).

During the period 1869-1913, freight rates in the Eastern route fell heavily. The opening of the Suez Canal was one of the main forces behind this phenomenon and it is intended in this Chapter to estimate approximately its influence.(1)

Table (8) shows the great saving in distances made possible by the building up of the Canal between ports West and East of Suez. It will be noticed that the distance saved in the case of Australia and New Zealand was comparatively much less important.

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(1) See Appendix B, Table No. (B-1) for the fall in freight rates of some articles transported from Eastern ports in the British Empire to the U.K. compiled from E.A.V. Angier, Fifty Years' Freights (1869-1919). Angier Brothers' Freight Report for 1870 stated that "The past year has been characterised by low or average rates of freight in most trades. The principal agents in the fluctuations experienced have been the adaptation and development of the Suez Canal route (steamers drawing 20 feet having passed through safely) to India and China, opening a wide scope for steam traffic to the East, and superseding the sailing tonnage by which the trade was previously held; the great continental war, and the generally disturbed state of politics". See also the Economist' Supplement, Commercial History and Review, of March 1871, 1872, 1873, 1874 and 1875, for the immediate effect of the opening of the Canal on freight rates and steamship building in Britain.

TABLE (8)

The Relative Advantages (in point of mileage) of the Suez Canal and the Cape Route.

Journey	By Cape Nautical	By Canal Miles	Distance Saved	Saving %
London - Bombay	10,667	6,274	4,393	41.2
" - Madras	11,280	7,313	3,967	35.2
" - Calcutta	11,900	8,083	3,817	32.1
Liverpool - Calcutta	11,600	7,900	3,700	32.0
London - Singapore	11,740	8,328	3,414	28.8
" - Manilla	12,900	9,700	3,200	25.0
" - Hong Kong	13,180	9,799	3,381	25.6
" - Aden	10,200	4,700	5,500	54.0
" - Adelaide	11,780	11,100	680	5.8
" - Melbourne	12,140	11,585	555	4.6
" - Sydney	12,690	12,145	545	4.3
" - Wellington	13,610	13,055	555	4.1
Marseilles - Melbourne	11,600	9,400	2,200	18.0
" - Saigon	12,000	7,200	4,800	40.0
" - Bombay	10,400	4,600	5,500	56.0
Hamburg - Yokohama	14,800	11,500	3,300	22.0

References:

Journal of Royal Statistical Society, 1887

Suez Canal Company's Publications.

To demonstrate the relation existing between the saving in distance and the saving in the costs of the voyage we would consider the following example of the voyage between Liverpool and Calcutta. The distance saved between these two ports was equal to 32%, and our question is how large was the saving in time consequent upon that. Normally, a sailing vessel had to spend, on average, about twelve weeks in this journey via the Cape route. Yet, that type of vessel did not gain more than a very trifling saving in time by using the shorter route. That was due, as previously explained, to the prevailing light wind in the Red Sea during most of the year. To such an extent, therefore, the saving in the distance could only offer a slight saving in time and when the Canal dues were considered, the cost of the voyage by using the longer route was, most probably, lower. The distance between London and Bombay was reduced by 41%, but still there would not be any significant alteration in the above conclusion.

In Table (9) it can be seen that the number of sailing vessels that navigated the Canal was entirely unimportant in any year. Steamers, on the other hand, as it has been explained in Chapter 1, used the Canal immediately after its opening. Conditions of navigation in the Red Sea were most suitable to them. Furthermore, the new route offered more coaling stations at shorter

TABLE (9)

Description of Vessels Passing the Suez Canal 1876-1886

Year	Merchant Steamers	Steamers Transports	Sailing Vessels	Postal Packets	Total incl. Others.
1876	1,042	37	5	315	1,457
1877	1,264	39	6	298	1,663
1878	1,089	75	25	282	1,593
1879	1,035	55	1	298	1,477
1880	1,534	54	-	363	2,026
1881	2,010	42	1	442	2,727
1882	2,361	134	-	501	3,198
1883	2,498	54	1	588	3,307
1884	2,455	96	-	614	3,284
1885	2,514	357	3	580	3,624
1886	2,258	117	2	614	3,100

Reference:

Suez Canal Publications.

intervals, and that helped steamers considerably since the majority of them were not fitted for long voyages because of the huge amounts of coal they had to carry by that time. The speed of different kinds of steamers, by then, varied considerably, for while some of them could not outrace a well built clipper, the fastest ships did 2000-2500 sea miles per week.

The saving in time consequent upon the saving in the distance between Liverpool and Calcutta by 32%, and the substitution of steam for sail, depended, therefore, on the type of steamer used in the voyage. For the fastest steamer of the time, there was a feasible saving in time of about 67%,(2) since that was able in average to spend only about 4 weeks between the two ports via the Suez Canal. On the other hand one finds in the early literature on the subject that some other kinds of steamers spent about 8 weeks in the voyage being considered, via the Canal, instead of the usual twelve weeks taken by a sailing vessel for the same distance but operating on the Cape route. Broadly speaking, it could be concluded that the shortening of the distance by 32% was followed by greater saving in time, i.e., it probably varied between 33% and 67%. That was the situation immediately after the Canal was opened for navigation, but by the mid 1870's it was evident that most of the

(2) These percentages are related to the original time spent in the examined journey by a sailing vessel via the Cape route.

steamers were able to spend only 4 weeks in the voyage from Britain to India.

Our task, now, is to find out the saving in the cost of the voyage consequent upon the saving in time, bearing in mind that while steamers operated in these days at high costs, because of their considerable consumption of fuel, sailing vessels did not pay for their propellant power. However, this question would be impossible to answer with any precision since the amount of data which I obtained on this particular point is neither sufficient nor precise to any extent. A rough estimation might, however, be ventured and could be of some help. According to early literature on the subject the Suez Canal dues of 10 francs per ton deterred many steamers from using the Canal route in the years 1869-1873.(3) Might it be suggested, therefore, that the immediate reduction in the cost of the Eastern voyage was, generally speaking, around 10 francs per ton so that it was offset sometimes by the dues? This argument is summed up in Diagram (6). Also, in the light of the diagram an attempt is made to distinguish the influence of the Canal from that of technical development in shipbuilding, on the cost of the Eastern voyage. In fact it is important to us

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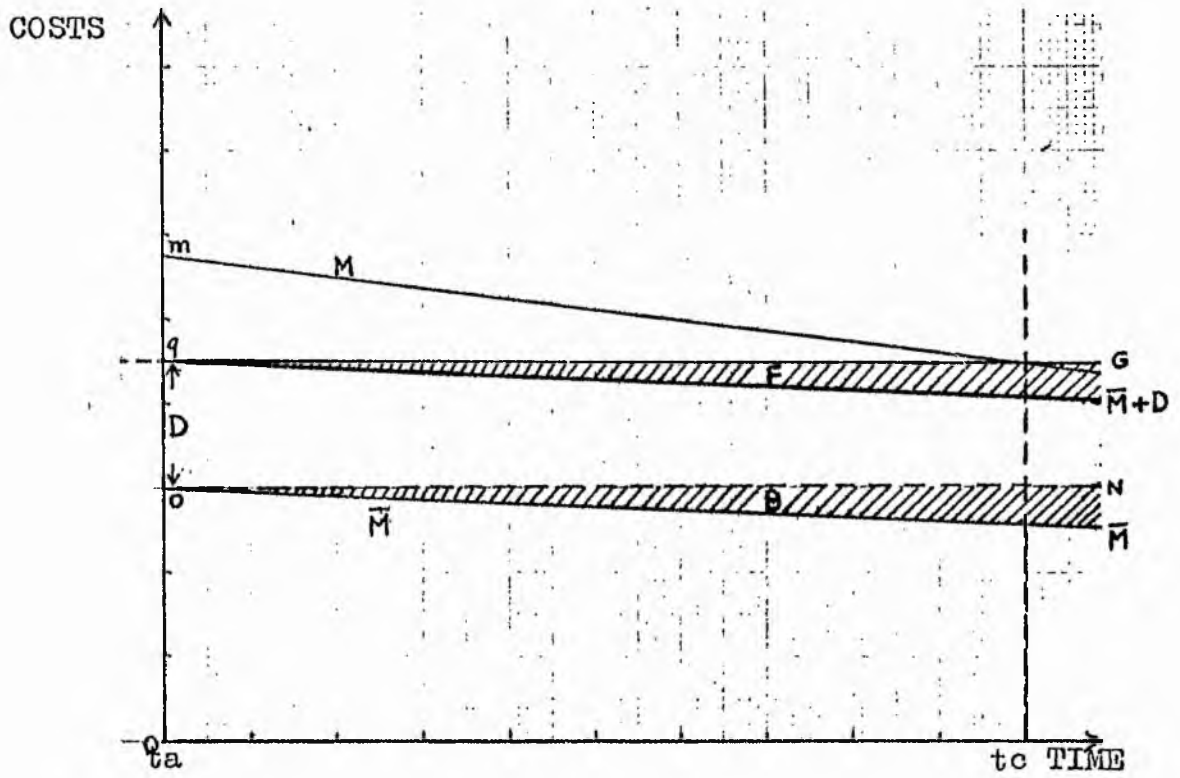
(3) See Chapter 1.

DIAGRAM (5).



to distinguish between the roles played by these two factors because some writers on the subject tended sometimes to overestimate the influence of technical development in shipbuilding upon the revolution of the Eastern transport in the late 19th century.

The horizontal axis in the diagram measures time, and the unit used for measurement is the year. The vertical axis measures costs, of a certain voyage between a port East of Suez and another West of Suez, in real terms. Let us assume that t_a prices = 100. The cost of the voyage would be defined so as to contain variable costs plus a certain profit margin, and this would hold whether the vessel used was a steamer or a sailing ship. However, it will be assumed, throughout, that profits and all costs which do not change directly with technical development in shipbuilding industry would remain constant at their level of t_a. Hence, the cost of the journey, via the Cape route, by a sailing ship which depends exclusively on wind for its propellant power is at t_a or at any other year equal to aq and represented in the diagram by the straight line G. We shall consider now a certain steamship whose design corresponds to the technique evolved in shipbuilding industry until t_a and denote it by "A". Let us add to this that A travels at a speed equal to x miles/week. At t_a

steamer A is incapable of sharing, with sailing ships, direct traffic between the two ports, if the Cape route is to be depended upon, since at a speed of x miles/week and with its rate of fuel consumption the journey costs ma which is greater than G by mq. However, at t_a the Suez Canal is cut and the distance between the Western port and the Eastern port is shortened by z%, so that if the Canal route is to be depended upon the cost of the voyage by A will be equal only to ao. On the other hand, the Canal route offers no advantage to sailing vessels and therefore they will continue to make the examined voyage at a cost equal to G. "ao" is smaller than G by oq, but as the Canal Company decides to impose dues equal to D=qo, the building of the Canal has just enabled A to stand on equal footing with sailing vessels at t_a, i.e., ao+D=G. Yet, the gain is remarkable, since it means that steamer A is enabled to establish its services, and also that any technical development in its design in the periods following t_a would consequently be net gain over sail and lower freights would be feasible. Now before we proceed in our analysis, we shall temporarily assume that the Canal dues remain constant at a rate equal to D throughout.

Through technical development in shipbuilding industry the cost of the voyage in question by steamships via the Canal is successively reduced by the end of each year, so that the curve representing it over a number of years takes the shape of a sloping line $\overline{M}$.(4) The fruits of technical development B can be measured by taking the difference between the straight line ON and $\overline{M}$. Adding the Canal dues in any year to $\overline{M}$, the curve shifts upwards to $\overline{M} + D$ which is, as shown in the diagram, lower than G for any year after t_a.(5)

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(4) About the year 1858, Elder began equipping steamers with a new type of engine, the novel features in which were the use of steam at greatly increased pressure, compound cylinders, and surface condensers. The engine succeeded in economising the use of fuel, i.e., coal consumption was reduced from 4-4½ lbs. to 3¼ lbs per indicated horse power, and made it no longer necessary for steamers to carry large quantities of fresh water. The first Atlantic steamer to be fitted with the new engine, compound expansion engine, was "Holland" of the National Line in 1869. Later Elder's engine was improved and the triple expansion engine was evolved. By the last named improvement coal consumption was reduced to 1.28 lbs., per indicated horse power. The success of the new engine caused a large number of steamers, which originally were fitted with compound engines to be tripled during the 1880's and the 1890's. Further improvements came in 1905, when quadruple expansion engines were built and began to be fitted into Atlantic steamers. Again these saved more coal per indicated horse power. Meanwhile, in 1894, "Pearson", invented the turbine engine which saved about 20% to 30% of coal consumption. For years, however, the economies of the engine were not obtained when worked at a speed suitable for the carrying

of the merchandise. Yet, about 1910 this problem was solved. The theory that over a long period major changes are feasible only through the accumulation of a large number of improvements, instead of being a result of a single revolutionary invention (Mathews, R.C., The Trade Cycle, p.70-74) would be adopted here. None of the several improvements in the design of steamships was, of itself, of major importance, besides the actual appearance of amy of them was little heeded during the same year and was rather distributed gradually over a number of years. It is assumed, therefore, in diag.(5) that no downward shifts would occur to M, or M, in any single year. Further, M and M are drawn as sloping straight lines, instead of being drawn in curve shape, for purposes of simplicity and exposition.

(5) Sailing vessels would be, therefore, forced to accept less and less profits if they wanted to maintain their business in the examined journey, i.e., G would shift downwards to M + D level. However, eventually, they would not be able to work at a loss and would be compelled to withdraw their services.

The important point which diagram 5 emphasises is that although the reduction in the cost of the voyage, for any year between t_a and t_c is made possible by technical progress, i.e., $\triangle F = \triangle B$, it is owed entirely to the use of the shorter route. This can be simply explained by considering the curve M instead of $\overline{M} + D$. It can be seen that, for any year between t_a and t_c, with the same amount of technical progress in shipbuilding assumed, steamers are unable to participate in the serving of traffic since $M > G$ throughout.

However, once t_c is reached steamers would be capable of reducing the cost of the examined voyage and, hence, of competing effectively with sailing vessels even in the absence of a short route between the East and the West, i.e., assuming that there are only two curves, M and G, in the diagram where $M < G$ in any year after t_c. Thus it can be said that after t_c the annual reduction in the cost of the Eastern voyage is all due to technical progress in shipbuilding industry. Furthermore as the diagram shows, the difference between $\overline{M} + D$ and M is apt to disappear in some years, since M is steeper than $\overline{M}$ and also because of the assumption which we made of constant dues. Let us assume for a while that no dues are charged for using the Suez Canal and think of the difference between $\overline{M}$ and M as a subsidy given to

steamers using the shorter route. Because M tends to be steeper than $\overline{M}$, the subsidy is constantly reduced with technical progress. In other words, as technical progress reduces the working costs of steamships and increases their speed, the reduction in the cost of the voyage consequent upon the shortening of the distance becomes less and less important. Now if constant dues equal D are imposed, that would work in effect as a tax of a progressive rate against the described subsidy and would, at some period, offset it completely, and after which point M + D would be greater than M. It is important, therefore, to reconsider the assumption of constant dues.

The result of a rise in D can easily be visualised in the light of the above analysis. On the other hand, a reduction in D can be made at different regressive rates and one of them can be fixed in such a way as to leave a certain constant gain for steamers using the shorter route. The ability of the Suez Canal management to do that would certainly depend on the flow of traffic between ports East and West of Suez, the smaller the trade taking place between them, the lesser the ability to reduce D, and the quicker the

difference between $\overline{M} + D$ and M would disappear.(6) At any rate, it can be conceived that M must touch $\overline{M} + D$, in some years in the very long run, as D will never be reduced below a certain minimum which would cover costs of maintenance and improvements of the Canal as well as other expenditures.

The above analysis deals in general with one journey between a port East of Suez and another West of Suez. We must be careful therefore to realize that the reduction in costs, consequent upon the shortening of the distance and the substitution of steam for sail, differed from one case to another. The maximum gain, as Table (8) shows, was in the journey between London and Aden, where by the way of the Suez Canal 54% of the distance was saved. If this case is represented on diagram (5) we would find that, from t_a the difference between M and $\overline{M} + D$ is considerable and the effect of constant dues equal to D is less felt as technical progress reduces the cost of the journey. On the

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(6) This analysis assumes that the size of the commercial ship grows without any restrictions. However, there are of course some limitations imposed by the size of trade and also by the depth and the width of the harbours of the trading countries. These latter can not always be changed with ease and sometimes costs involved in harbour improvement projects amount to very high sums.

other hand, the minimum gain, in terms of distance saved, was obtained in cases of journeys to ports of Australia and New Zealand. Since the Canal dues were much the same in this case as in other cases, it was impossible for steamships to establish their services between British ports and Australian ports via the Canal for many years after 1869.(7) There was an exception, however, in the case of passenger traffic. Steamers carrying emigrants and other passengers to Australia used the Canal route from the early 1870, as they preferred to pay more for the shorter and more convenient journey.

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(7) "At the outset Australian traffic through the Canal increased much more slowly than Asian traffic. It did so because the very nature of the Australian passage (with its great distance, favourable winds and the difficulty of obtaining coal supplies) encouraged ship-owners to continue using sailing vessels, unsuited for the Canal route, on the Australian run long after they disappeared elsewhere. In addition, the actual distance saved, which varied according to intermediate ports, courses made, season of the year and class of vessel, was not very great, and the saving in time had to be balanced against the expense of passing through the Canal"....P.7., The Suez Canal and the Australian Economy, Woodruff and McGregor.

However, the saving in time in the Australian voyage was, as in other cases, much more significant than the saving in the distance consequent upon the cutting of the Suez Canal. Thus while the distance saved by the Canal from London to Melbourne or to Sydney or to Wellington averaged a little over 4% the time saved was, by the mid 1870's, over 45% in the outward journey from Britain and over 35% in the homeward journey.(8) The above argument dealt with the role which the Canal played in reducing the cost of the Eastern voyage. Nevertheless, although this fall in costs was very notable and considerable, it would be impossible to measure quantitatively its influence in reducing freights charged by shipping firms;

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(8) In 1877, the British steamer "Lusitania" passed through the Canal on her voyage from Adelaide to London, making the passage in forty instead of the usual one hundred days taken by sailing vessels using the Cape". The Suez Canal and the Australian Economy". P. 8. The journey from Australian ports to British ports took in general something about 65 days, and the outward journey from Britain took about 75 days by sailing vessels using the Cape route. (Edinburgh Review. Vol.103. 1856. An article on the Suez Canal). The actual time spent in the journey varied after that according to different factors as mentioned in Footnote (7).

firstly, because of the inadequacy of statistical information, and, secondly, because the influence of other forces which affected rates of freight in the Eastern route, during the same period, can not easily be isolated.

Thus, it is intended in the following discussion to investigate two main points; first, the influence of the favourable conditions which the opening of the Suez Canal had created for steamships on the degree of competition between shipping firms trading with the East, and the extent to which that had led to reduction in freight rates; and secondly, the importance of other forces, rather than the Suez Canal, which affected freight rates in the Eastern route during the same period, 1869-1913.

The Ocean Steamship Company had business in China and the Far East as early as 1866. The steamers of the company were to follow a route round the Cape, calling at Mauritius, Penang, Singapore, Hong Kong and ending the voyage at Shanghai. The cargo capacity of most of the steamers employed in this run was in the region of 3,000 tons and the time they spent was estimated at 77 days in the outward journey from Liverpool, while the homeward journey took about 84 days. A well built clipper of a cargo capacity of 1,000 tons, and with fair wind took on average about 90 days from Foochow to London, but ordinarily a

clipper took between 120 and 150 days on such a voyage. In spite of these advantages in speed and in carrying capacity the Ocean Steamship Company, the only steamship company which established direct trade with the East before the opening of the Canal, had to fight a bitter battle for survival. They had to offer lower rates of freight to shippers, if these were to be persuaded to use the new type of vessel, and, yet, they could not do that with any ease as their working expenses were relatively high. In 1866 the Company charged "...a rate of £6 plus 10% per ton of 40 cubic feet on outward cargoes, a rate which sailing vessels could quite easily undercut. On the homeward voyage the rate varied according to sailing ships rates but were invariably higher...". Although the Company"...improved both the outward and homeward time between 1866 and 1869 by making adjustments to the sailing schedule, it was not until the opening of the Suez Canal that any appreciable difference was made to the length of the voyage."(9)

The old established situation of sailing vessels trading with the East, via the Cape route, was not however likely to be weakened immediately after the opening of the Canal. Merchants still trusted the old

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(9) "Blue Funnel", p.24. Hyde. F.E.

type of vessel, instead of steamers, to carry their trade. Thus, while a few steamers were chartered for the rice ports immediately after the opening of the Canal, most of them could not, yet, offer all the facilities of sailing ships. Besides, the rise in wages of seamen, in coal prices, and in the Canal dues had materially added to the working expenses of steamers and offset some of the advantages which they obtained from the Canal. Yet steamship owners fought bitterly to capture business from sailing vessels. They undercut rates of freight in expectation of larger business, but, most probably, they achieved lower profits, than those which sailing vessels made, when they did this. For the year 1871, the "Economist" reported that goods had been carried by steam to Calcutta on terms scarcely sufficient to pay cost of taking on board, stowage and delivery.(10) Nor were 1872 and 1873 good years for steamship owners, in general. As a rule freights had been low, whereas a rise in price of coal - from £481 per ton in 1869 to £1.045 in 1873 - still added to their expenses. Sailing vessels, therefore, succeeded in these few years in holding their own or even achieved remunerative freights in the Eastern run.

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(10) The "Economist", Commercial History and Review, for the year 1871, The "Economist", March 1872

However, the booming conditions which the opening of the Canal created for steamships did much to accelerate their production,(11) favouring in particular the building of steamers with larger capacity, fitted with compound engines and capable of navigating all kinds of water. In 1870 British shipyards built 219,435 steam tonnage against 99,598 tons of sail, and in the following three years they built 917,948 tons of steam against 200,044 tons of sail. Although production of steamships was slowed down in 1874 and 1875, it was again resumed at a higher rate throughout the period. Such a rapid rise in the production of steam tonnage, mainly, by that time, for British and European shipping companies trading with the East, was only expected to increase competition and to force down freight rates. Sailing vessels, unable to match steamship companies in reducing freight charges, started to withdraw from serving the Eastern trade, except that of Australasia where the direct gain from the Suez

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(11) See reference given in Footnote No. (1). See also, Clapham, J.H. "An Economic History of Modern Britain, 1850-1886", p. 72, 214 and 215. Sargent, A.J. "Seaways of the Empire", on the influence of Suez Canal on the substitution of steam for sail., Walter, M.S., "Britain Yesterday and Today", p.144-145-146., Bowley, A., "Foreign Trade in the 19th Century", p. 89-94 Hallberg, C.W., "The Suez Canal", Appendix A., and Hoskins, H.L., "British Routes to India," Chapter XVIII.

Canal was comparatively much smaller and also where other circumstances still favoured their use. As they crowded, gradually, to operate on the Australian passage, sailing vessels' services were very much cheapened.(12) Almost until the late 1920's freight charged by sail serving the Australian trade with the West, by the Cape route, remained lower than those charged by steamships.(13)

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(12) "The Suez Canal and the Australian Economy", p.5.

(13) In the late 1920's sailing vessels were chartered for about 10/- per ton less than steamships., Villiers, A.J., "Falmouth for Orders", p.xix.
Also from Lord Brassey, Government House, Melbourne, Victoria. to Mr. Chamberlain, in July 27, 1896, P.P. 1897, Vol.LX., Parliamentary Papers, "The freights from Great Britain and Europe vary so greatly, however, with the seasons of the year that it is almost impossible to give anything like a fair average. When the vessels required to take away our produce are sailing from England, Germany or France to load in Victoria, freights are very low, and for dead weight or bulky goods are sometimes merely nominal. Heavy materials have been brought both from Germany and Great Britain for as little as 6/- per ton in sailing vessels, and at a slightly greater freight in steamship. On the other hand, when there is little return cargo, freights on the same class of goods are as high as 30/- per ton in sailing ships, and considerably more in steamers."

Although the competition between steam and sail led to a considerable fall in freight rates, that which was growing, at the same time, among steamship firms trading with the East, via the Canal, was remarkably vigorous and had further cheapened their services. The history of the P. & O. Company and Holt's Company (the Ocean Steamship Company) - the two companies which employed steam in their trade with the East before 1869 - reveals the dramatic fall in their incomes during the 1870's because of the rivalry of the new steamers which were built particularly for the Eastern trade, with suitable measurements for transit through the narrow channel. Apart from the losses which the P. & O. Co. suffered because of replacing its huge fleets of ships, which were suitable for European waters at one end and for the tropics beyond Suez at the other, by ships fitted for the through traffic via the Canal,(14) the company had to accept much lower rates of freight than those which were obtainable before 1869. "In 1866, the Company

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(14) The P. & O. Co., lost also all her costly establishments and organizations in Egypt, which are connected with the use of Suez-Alexandria overland route. See also losses which the Company suffered because of the mail contract with Egyptian railways, p. 104 in this Chapter.

carried specie-partly gold, partly silver-worth nearly £11 millions, and by so doing earned about £230,000 in freight; but in 1872 carried nearly double the amount of specie and received for it only £60,000". "In the year before the Canal opened, the carriage of 46,000 bales of silk brought in £110,000, but in 1871 an increased carriage of 50,000 bales only earned £44,000, instead of the £119,000 which would have been received at the old rate".(15)

The situation of Holt's Company was more or less the same..."very reluctantly and after every one else had set us the example"...wrote A. Holt, "we reduced our outward freights". By the end of 1877 the Holt Company was forced to reduce them as low as 30/- per ton.(16)

It was the rapid rate of technical progress, that took place by then, in shipbuilding industry which always put new steamers in a better competitive position and enabled them to undercut existing rates of freight. Besides, the new outlook which most of the European countries took towards the Eastern trade, after the building of the Canal, had further intensified competition among shipping firms operating on the Canal route.

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(15) A Hundred Years History of the P. & O., by Cable, Boyd, published in 1937, Chapter 23.

(16) Hyde, F.E., "Blue Funnel".

During the 1850's and the 1860's, the opponents of the Suez Canal project in Britain found it impossible to believe that most of the European countries would be able, or willing, to deal directly with the East "if" the Canal project succeeded.(17) Yet, the success and the completion of the gigantic project in 1869 had done much to stimulate rosy expectations about the future of the Eastern trade. Also, and unexpectedly, the commercial success of the Sues Canal necessitated, and certainly was conditioned by, the replacement of all the ships which carried the Eastern trade before 1869 by new steamers. Under these new circumstances, and motivated by patriotic reasons too, European countries were encouraged to build up their mercantile fleets and to develop their trade with East of Suez. British shipyards played a significant part in bringing about such change. In 1870 all the steamers of the North German Lloyds and 60% of the Austrain Lloyds were of English construction and until the first world war, British yards continued to be swamped by European orders.(18) European traffic in the Suez Canal increased

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(17) See Chapter I.

(18) See Table No. B-2, Appendix B.

from 112,000 net tons in 1870 to 1,530.000 net tons in 1890. Such growth was considerable, but it was much slower than that of British traffic during the same period. From 1890 to 1910 British traffic was still rising rapidly, but European countries were able to develop theirs at even a faster rate. European traffic in the Canal was doubtless correlated to the development of their steamship firms. Diagram (6) shows a significant correlation between the growth of the Canal traffic of eight European countries - France, Netherlands, Germany, Italy, Austria-Hungary, Spain, Norway and Russia, (19) - and the development of their steam tonnage.

The growth of shipping firms trading with the East in these countries was, however, greatly helped by the generous subsidies which they obtained from their governments and which enabled them to undercut freight rates and to charge lower fares to their passengers. The Messageries Maritimes received a subsidy of £120,000 per year from the French government for carrying mail to and from the East and the period of contract was made to cover 20 years. Besides the French government paid to the Company a considerable

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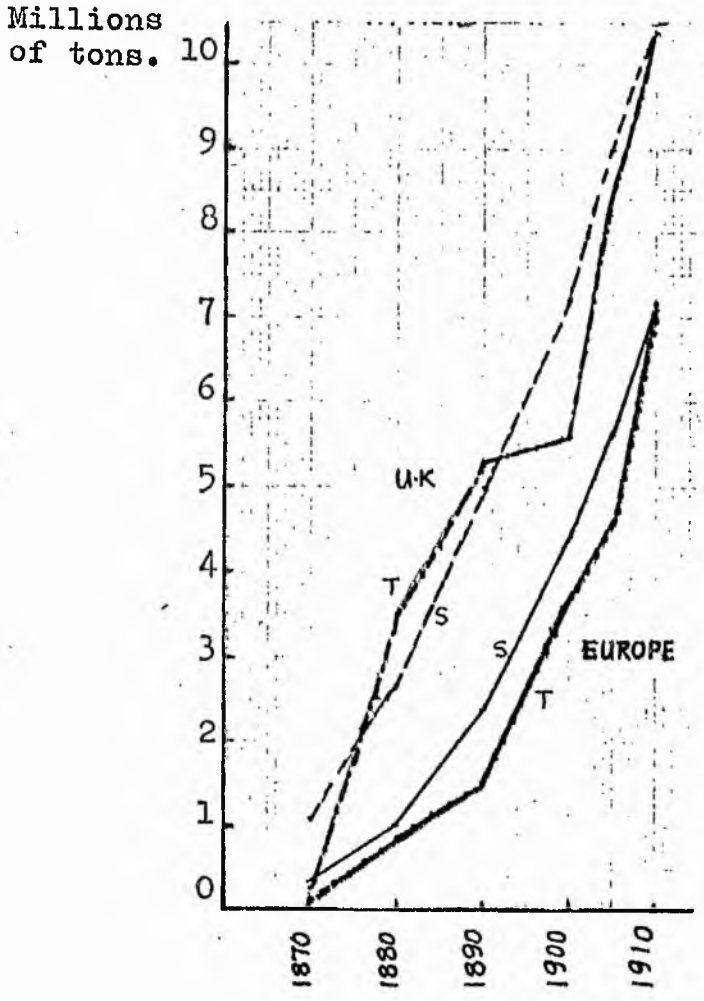
(19) European countries which had traffic in the Suez Canal during the period 1869-1913. See also Table No. B-3, Appendix B.

DIAGRAM (6).



T « ——— »
- European traffic in the Suez Canal.

S « ——— »
- Net steam tonnage of European countries whose traffic is represented in the diagram.

T « — — — »
- U.K traffic in the Suez Canal.

S « - - - - - - »
- U.K net steam tonnage.

proportion of the costs of building their ships and undertook to buy the ships if for any reason the service ceased. The Nord-Deutscher Lloyd received a subsidy of £200,000 per year from the German government.(20) This was also called a mail subsidy but from its magnitude it may fairly be looked upon as a trade bonus. Half of the subsidy mentioned was specified for the Australian section and the other half for the rest of the East. German ships carried goods to the East at rates 10/- to 15/- lower than those from Liverpool. It is interesting also to add that rates of freight and fares for passengers of the German subsidised line were fixed and controlled by the Imperial Chancellor. The foregoing were not the only companies known to receive subsidies, Austria, Italy, Belgium and Russia had also paid generously to their shipping firms to help them in establishing their trade with the East after the cutting of the Canal.

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(20) These figures are obtainable in p.p. 1897, Vol.IX, letters sent from several Australian colonies to J. Chamberlain in reply to his letter to them. Yet, there was no indication, whether they represented the total, or only a portion of the subsidies which these French and German Lines obtained from their governments.

While mail services with the East which European shipping firms performed, via the Canal, had helped them to obtain generous subsidies from their governments and enabled them to arrange regular services at lower freight rates, mail services which the P. & O. carried before 1869 with profit became a disaster to the company after the Canal was opened. According to contract P. & O. still carried mail partly by railways between Alexandria and Suez and "..the heavy overheads and onerous conditions of mail service brought P. & O. revenue down by a quarter of a million sterling a year to begin with and by nearly half a million by 1876". (21) That situation obviously weakened the competitive position of the British company in the East, and although it was later given a mail subsidy of £35,000 sterling a year, and also operated via the Canal, that subsidy was poorer than those given by European governments to their lines in similar circumstances. Another British Line, the Orient Mail Line, was also granted a subsidy by the government equal to that which the P. & O. obtained. Apart from these two British Lines, British shipowners trading with the East had

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(21) A Hundred Years History of the P. & O., by Cable Boyd, Chapter 23.

not been given any assistance from the government and they, therefore, had a reason to claim that the practice of subsidisation which many European countries embarked upon since 1869, and particularly from 1895 to 1901, had complicated the competitive pattern in their trade and artificially lowered freights. In answer to their complaints, a select committee was appointed by the House of Commons in 1901 to investigate the matter. The Committee could not however establish that subsidisation had affected freights to the extent of lowering them. Yet, the Committee believed that the threat to British ships from subsidised European lines was a real one in so far as the China, Japan and Australia trade was concerned.

The following (22) which is a comparison of the freight rates charged by different lines on drapery imported into Victoria, shows the role which subsidisation had probably played:

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(22) These rates are for "the stock of drapery warehouse, but may also be considered as applicable to all valuable goods requiring quick despatch", P.P. 1897, Vol.LX, p.354.

1. From London via Marseilles to Melbourne, by the Messageries Maritimes, subsidised French Line, 35/- per ton for all goods.

2. From London to Melbourne by the Orient Mail Line, subsidised, 40/- per ton for heavy goods, 60/- per ton for light goods.

3. From London to Melbourne by the P. & O. Company Line, subsidised, 45/- per ton for heavy goods, 65/- per ton for light goods.

4. From London to Melbourne by the Aberdeen Line, 30/- per ton for heavy goods, 40/- per ton for light goods.

5. From London to Melbourne by the Port line, 35/- per ton for heavy goods, 42/6d, per ton for light goods.

6. From London to Melbourne by Lund's line, 30/- per ton for heavy goods, 40/- per ton for light goods.

7. From Bremen to Melbourne by the Nord Deutscher Lloyd's Imperial Service, subsidised 35/- per ton.

..."taking into consideration the duration and regularity of the voyages, the subsidised German and French Lines may be considered to be the cheapest, especially as the freight by the latter includes carriage from London to Marseilles - the port of departure".

We turn now to consider the influence of the attempts which had been made during the period, 1869-1913, to restrict competition among shipowners trading with the East with a view to maintaining regular rates of freight. It is not, however, the object of this research to investigate the history of the "Shipping Rings" or "Shipping Conferences", which took place in this particular trade since the early 1880's, but only to find out the extent to which they succeeded in limiting competition in freights.

The idea of the conference was founded and had principally been carried by British shipowners. Later, mainly during the 1890's and after, some of the European Lines trading with the East joined them and that had undoubtedly strengthened the conference and raised rates of freight. For example, the results of the agreements between Holts' Company and some rival Dutch companies in 1893 had the effect of raising freight rates on both the outward and the homeward cargoes after they sank considerably to unprofitable levels in the previous years after competition. Holt's had been able to raise rates on fine textiles, in the same year 1893, by as much as 7/6d. to 10/- and as rates on other goods were also raised, the Company's net profits for 1893-1894 were nearly

double those of the preceding year.[23] The competition of the shipping firms which rejected the idea of maintaining freights had often made it impossible to the conference Lines to stick to the rates which they agreed to charge and to maintain. The work of the conference did not go, therefore, throughout the period without several interruptions. An example can be found in the British trade with the Straits Settlements. After the opening of the Canal the relation of the outward to the homeward trade was changing, more tonnage came to be required for the general trade outward to the colony than was needed for the carriage of its produce homewards.[24] Competition for homeward

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(23) The increase in Holt's net profits in 1894 was also caused by other factors, mainly the lowering of the Canal dues, the fall in the price of coal and the employment of the cheap Chinese seamen. See Hyde, F.E., The Blue Funnel.

(24) Before the opening of the Suez Canal a large portion of British imports from the Straits Settlements was re-exported to Europe, but after that date this situation was changing as European countries were increasing their direct imports from the East. Meanwhile British exports to the Straits Settlements continued to grow after 1869. See also relevant parts in Chapter 4. Also, G. Boggars, The Effect of the Opening of the Suez Canal on the Trade and Development of Singapore, published in "Journal of the Malayan Branch of the Royal Asiatic Society", Vol. 28, pt.I, 1955.

cargo was therefore so keen and except when tonnage was scarce, the large merchant in Singapore was almost in a situation to dictate his terms on steamship Lines. In the years 1885-87, conference existed, therefore, in the homeward trade from the Straits with a view to limiting competition, but it was discontinued from 1887 to 1893 then reconstituted to 1895 when it broke up again because of competition". In 1896 tonnage visiting Singapore for homeward cargo increased enormously so that freight rates were lowered to unpre-cedented levels, the rates to Europe were as low as 5/- for tin, and 6/3d for copra, sago, tapioca, pepper and other bag goods"...In 1897 the conference was re-established.(25) Sometimes the conference was threatened because of disputes between members on the general policy and when such situations developed, so that some of the Lines withdrew, competition returned and freight rates fell considerably. In his evidence before the Royal Commission on Shipping Rings, 1909, Sir J.L. Mackay, the director of British India Steam Navigation Company(26) reported that "in the course of 1905 a dispute arose between the P. & O. Company and

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(25) Royal Commission on Shipping Rings, P.P. 1909, Vol. XLVII, see under the British trade with Singapore.

(26) See previous reference, Footnote (25), for the evidence submitted by Sir J.L. Mackay, Q 19678, and subsequent.

Hansa Line, in regard to the right of the P. & O. Company to load at Antwerp. The German Line withdrew from the conference and then a freight war ensued between the two lines for freight between Middlesbrough and London and Calcutta...Rates to the East, in consequence, fell heavily and the conference had to lower its rates"...

It was very important to the conference, therefore, to adopt measures in order to meet the competition from outside firms. The conference's firms agreed to carry goods from and to their rivals' main ports at rates equal to those which the latter would charge. But as those rivals were mainly Europeans this policy was unjust to the British merchants and the data which were submitted to the Royal Commission on Shipping Rings to prove it were more than sufficient. For example,in 1899 hardware was carried on conference ships from Amsterdam to Java, via Liverpool and Suez, at 20/- a ton, while British hardware carried in the same vessels from Liverpool to Java, via Suez, was charged 30/- a ton. To give another example, iron goods were carried during the 1890's by conference' ships from Antwerp to the Far East, via London and Suez, at 6/- to 10/- a ton less than a similar cargo from London. As regards the carriage of the Eastern produce homewards, Mr. Charles Schlee of the East India

And China section of the London Chamber of Commerce,(27) stated that British ships were carrying Eastern products to Britain at much higher rates than they did to other European countries. Although the conference worked out a system or rebate to shippers who kept their customary business to its lines, "net rates" were still considerably higher than those which a free freight market would have regulated during the selected period. In fact some British merchants found it cheaper for them to ship their goods to the East via continental ports and obtain their Eastern requirements carried by European lines outside the conference. Yet, such cases did not develop, simply because the cargo capacity of the European ships which refused to join, or withdrew from, the conference could not be sufficient to serve the British trade with the East beside their trade therein. Consequently, the conference policy regards the carrying of the British-Eastern trade was bound to succeed.

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(27) See previous reference, Footnote 25, for the evidence submitted by Mr. Charles Schlee, Q.2308 and subsequent.

Conclusions:

The above analysis showed that the employment of steamshipping in the Eastern trade was significantly fostered and quickened by the Suez Canal. The implications of this situation have been worked out in some detail and it has been shown that the fall in the cost of the Eastern journey after 1869 was partly consequent upon technical progress in shipbuilding and partly upon the shortening of the distande after the building of the Suez Canal. However, the gain from technical progress in shipbuilding was only realized in practice when the Suez Canal was used.

However, the reduction in shipping costs would not necessarily be reflected in lower freight rates. The latter, particularly in the short run, would depend upon the supply of shipping tonnage in the market, the demand for shipping services and the degree of competition prevailing in the market. Looking back to 1869 we have found out that the opening of the Suez Canal had greatly increased the supply of the tonnage and the degree of competition in the Eastern run. The increase in tonnage came through the growth in the number of steamships employed via the Suez Canal. The increase in the

degree of competition among shipowners was partly a result of the increase in tonnage, which was obviously faster than the growth of the requirements of the Eastern trade, and partly because of the unavoidable discrimination of the Suez Canal route against the owners of sailing vessels who monopolized the trade before 1869. The latter had to fight against the new steamship firms in order to keep their business. Later sailing vessels owners had to fight for their survival but they lost the battle in all the routes except that of Australia where the saving in distance by the Suez Canal was small. The "cut-throat" competition between steam and sail shipowners resulted in a heavy fall in freight rates in all Eastern routes including that of Australia. Obviously the lower freight rates which steamship owners were able to offer against their competitors reflected the decrease in their costs consequent upon technical progress and the use of the Suez Canal. Competition among the firms operating steamships on the Eastern run via the Suez Canal was also vigorous and resulted in heavy cuts in freight rates. Unlike the other case, lower freight rates here reflected the financial strength of the individual steamshipping companies and their ability to cut down their costs or their profit margins. In this respect the new European steamship firms were favoured by the

generous subsidies which they received from their governments to encourage their growth. On the other hand British shipowners had hardly been given any subsidies (except the P. & O. and the Orient Steam Line). Besides, the British shipowners suffered from the competition in the Eastern run after the opening of the Canal more than their European competitors because it was they who owned the largest number of sailing vessels which carried the Eastern trade before 1869. This situation would help to explain why the attempts for limiting the degree of competition among shipping firms had first started among British shipowners trading with the East. It has been shown that the work of the "Conference" had succeeded particularly after 1890. Nevertheless as many of the European firms trading with the East were unwilling to share with the British in the "Conference" and continued to serve their countries at lower rates of freight British trade with the East was bound to be unfavourably affected.

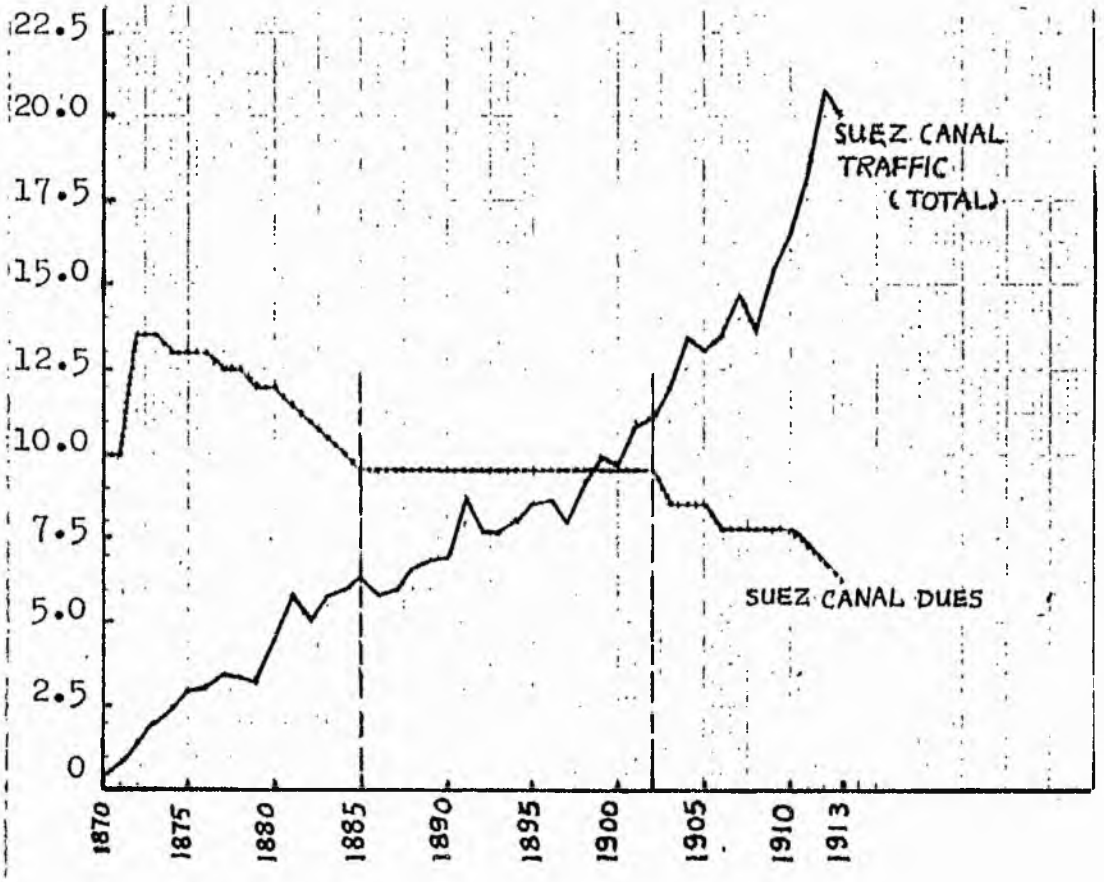
SECTION II:

THE COST OF USING THE SUEZ CANAL. (1873-1913)

Diagram (7) shows that the Canal dues were reduced between 1873 and 1885, kept at a constant rate from 1885 to 1902 and then were reduced again until 1913. It was probably that in the first of those periods, where competition was so intense between shipping firms trading with the East, reductions in dues had not added to the profits of steamship owners operating on the Canal route but were rather reflected in lower freight rates. Yet, the situation during the early 1889's was different from this generalisation. By that time Canal traffic was rising rather rapidly whilst the conditions of the navigable channel of the waterway had not been much improved since 1869. As a result of this factor, and also because of the deterioration in the services of the Canal pilots, the average time spent in transiting the Canal was notably rising. Thus the relative advantages of the Suez Canal were reduced and this meant that the cost involved in using it was effectively increased. Information on the subject reveals that some traffic was deterred from using the Canal route under these

DIAGRAM (7).

* Traffic in millions of net tons.
* Dues in francs/net ton



circumstances.(28)

In Britain, building another canal, beside the Suez Canal, was thought the best solution for ending the considerable delay in transit between Port Said and Suez. The British government - of which Gladstone was Prime Minister - decided to sponsor this idea and reached an agreement about it with De Lesseps.(29)

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(28) In a Parliamentary debate in 1883 the problem of the delay in transit between the two Seas was discussed, and there were many suggestions of building another Canal to solve it. "Mr. Giles, member for Southampton introduced a very practical note. Speaking as an engineer, he observed that one Canal double the present width would be more useful than two narrow ones. The present traffic of twelve ships daily and the talk of the necessity for two Canals was idle. The existing Canal could be widened for less than half the cost of making a new channel. As to tolls, from Cape to Bombay was 4,450 miles longer than via Suez - Equivalent at 10 knots to 18½ days. Deducting two and a half days - the average time taken in making the transit between Port Said and Suez - the extra time was reduced to 16 days. The question was one of figures. Traffic was being driven away because the tolls often cost more than 16 days' steaming...". (Wilson, A.T., Suez Canal, p.74).

.....That was an intelligent observation. Yet it should be made clear that official Canal dues did not cost as much as 16 days' steaming. What happened in fact was a considerable rise in the actual cost of using the Canal due to the maintenance of a high rate of dues and also due to the increase in time taken in transit. In 1877 the Egyptian Quarantine Regulations would not allow the Pilot to board the ship for the transit. This was overcome by the Pilot proceeding in a

small boat ahead of the ship and shouting his instructions to the Captain on the bridge. Under these circumstances some transits took up to four or five days and some even 10/15 days. Obviously that was the main factor which reduced the relative advantages of the Canal by that time. (See A Hundred Years History of the P. & O., by Cable Boyd).

(29) For the original agreement between the British government and the Suez Canal Company in July 1883 see Egypt, No. 17, 1883, pp.44-5, or Wilson, A.T., p.66-7.

The agreement also designed a programme to reduce transit dues of the Suez Canal with the increase in the Company's profits until a minimum of 5 francs per ton was reached. Besides, De Lesseps agreed to diminish pilotage dues gradually and to treat ships in ballast differently. This agreement, known later as "London Programme", was signed on July 1883 and was not universally welcomed in Britain. In the following months, dissatisfied with the agreement, the "Association of Steamship Owners Trading with the East" contacted the Canal Company and succeeded in reaching another agreement by November of the same year.(30) As regards the delays in transit between the two Seas, which were expected to develop with further expansion of the East-West trade, the makers of that second agreement saw reasonably that it would either be solved by constructing another canal or by enlarging the Suez Canal. As regards pilotage dues, it was agreed to extinguish them entirely from the first of July 1884. Different treatment for traversing ships in ballast was confirmed. Besides, as in the first agreement, but on a different sliding scale, transit dues were also to be diminished as profits

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(30) For the original agreement between Association of Steamship Owners Trading with the East" and Suez Canal Company see Egypt, No.3, 1884 C.3850, or Wilson, A.T., pp.82-85.

increased until a minimum of 5 francs per ton was reached. Most important, however, the makers of the first and the second agreements could not foresee that the enlargement of the existing Canal and the reduction of its dues would prove essential, whether the profits of the company increased or decreased, if the costs of the Eastern voyage via the Suez Canal, the shorter route, were to be kept lower than that of the Cape route, or, indeed, if the Canal route was to be used as such or not.

In the years following 1883 the necessity of improving the Canal was recognised. Between 1884 and 1913, 209.867 mil. francs were spent on deepening and widening the Canal in order that it could be used by steamers which were growing constantly in size. (31)

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(31) The largest steamer which had passed through the Canal in 1884 was the Orient Company's S.S. "Austral" of gross tonnage of 5,665 tons and a draught of 27 feet, when fully loaded, while the maximum depth permitted, at the time, for ships navigating the Canal was 24 feet and 6 inches. In the following years larger and larger (size) steamers were built in the U.K. The largest steamer launched in U.K. in 1895 was the "Georgic" of 10,077 gross tons (the Economist, 1896, Feb. 22) and the largest steamer launched in 1899, in the U.K., was the "Oceanic" of 17,274 gross tons (the Economist, 1900, Feb. 17) The Canal Company had therefore to spend an increasing portion of profits on improving the channel, since otherwise business would have been lost to the Cape route.

Navigation by light during the night was also introducted by 1887 and that of itself had almost doubled the capacity of the Canal and thus helped significantly in ending the delays in transit between Suez and Port Said. With regard to dues, the proposition concerning ships in ballast was carried on by the Canal Company as planned in the 1883's agreements. Dues on ships with cargo were reduced by 50 centimes in 1884 but were maintained constant after that at their level of 9.50 francs per ton until 1902, although profits of the company had been rising remarkably since the early 1890's (see Table 10). The Canal Company, in fact, observed neither its agreement with the British government, nor the agreement reached with the Ship Owners trading with the East. As explained earlier, constant dues meant, that a rising proportion of the cost of any voyage via the Suez Canal was paid to the Canal Company. (32)

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(32) The London Chamber of Shipping pointed out to the Board of Trade in a letter dated 15th March 1904 that, "In the year 1883 the proportion of Suez Canal Dues to the freight earned was very much less than it is at the present time. A vessel taking coal to ports East of the Suez Canal may now have to pay about one half of her outward earnings and one-fourth of her homeward earnings in Canal dues alone"... In the light of Diagram (5) technical progress was constantly reducing the working costs of steamships, while Canal dues were maintained at a constant rate between 1885 and 1902.

TABLE (10)

Suez Canal Dividends, 1883-1913

Year	DIVIDENDS Per Share Francs	Per Cent	Year	DIVIDENDS Per Share Francs	Per Cent
1883	88.657	17.7	1900	108.000	21.6
1884	87.252	17.5	1901	125.000	25.0
1885	85.405	17.1	1902	125.000	25.0
1886	75.335	15.1	1903	126.000	25.0
1887	78.325	15.7	1904	141.000	28.2
1888	84.478	16.9	1905	141.000	28.2
1889	85.894	17.2	1906	141.000	28.2
1890	86.751	17.4	1907	141.000	28.2
1891	87.150	17.4	1908	141.000	28.2
1892	92.366	18.5	1909	150.000	30.0
1893	90.373	18.1	1910	158.000	31.6
1894	90.000	18.0	1911	165.000	33.0
1895	92.500	18.5	1912	165.000	33.0
1896	92.500	18.5	1913	165.000	33.0
1897	90.000	18.0			
1898	100.000	20.0			
1899	108.000	21.6			

Source: Suez Canal Publications

Nevertheless, although the burden of the Canal dues was notably felt over some periods of time steamships particularly those which served India and other Far Eastern colonies maintained their dependence on the Canal throughout the period. It is indisputable that the great saving in the cost of shipping and the time of the Eastern voyage was the prime reason for this dependence. Besides, the possibility of picking up intermediate freights and passengers was much greater when steamers trading with the East passed through the Mediterranean Sea and Suez Canal. Secondly, ships paid lower insurance rates when they used the shorter and the safer route. Thirdly, mail and passenger traffic preferred the use of the Canal, for purposes of speed and regularity, and as the, were always very remunerative they indirectly subsidised the carrying of merchandise.

In 1903, after the dividends paid per Suez Canal share reached 25%, the Canal Company decided to reduce transit dues to 8.50 fr. per ton and in the following years two other reductions took place, so that dues stood at 6.25 fr. per ton in 1913. Whether or not such reductions had affected freights charged by lines operating on the Canal route can not be determined in the absence of sufficient information. At any rate, we must expect that a portion of such

reductions in dues had been added to the profits of the shipowners, since competition between them was very much lowered during the period.

APPENDIX B

STATISTICAL TABLES;

* U.K Outward and Homward Freight Rates ,Eastern Route during the Period 1870 to 1913.

* Tonnage Built in U.K for European Countries. 1893 - 1900.

* European Countries Steam Tonnage and Traffic in the Suez Canal.

APPENDIX (B). (TABLE NO. B-1)

Ref: E.A.V. ANGIER. "Fifty Years' Freights 1869-1919". London 1920.

Homeward Freight Rates in Shillings and Pennies. (1869-1913).

Eastern Ports to U.K.

Article	Rice		Jute etc.		Coffee		General		General	
From	Burmah		Calcutta		Ceylon		Bombay		Karachi	
Unit of Measurement.	Per Ton (W)		Ton Calcutta Scale		Ton Colombo Scale		Ton Bombay Scale		Ton Karachi Scale	
Year.	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest
1869	72/6	60/-	.	.	67/6	65/-	..	.	.	.
1870	67/6	52/6	.	.	.	.	.	.	.	.
1871	100/-	60/-	100/-	90/-	100/-	55/-	.	.	.	.
1872	102/6	65/-	92/6	60/-	90/-	60/-	65/-	35/-	.	.
1873	97/6	72/6	95/-	80/-	.	.	57/6	52/6	.	.
1874	100/-	82/6	.	.	85/-	75/-	60/-	50/-	65/-	50/-
1875	87/6	72/6	.	.	80/-	72/6	53/9	47/6	55/-	50/-
1876	80/-	62/6	.	.	.	.	52/6	42/6	57/6	47/6
1877	77/6	65/-	.	.	80/-	65/-	52/6	37/6	55/-	42/6
1878	60/-	30/-	.	.	60/-	27/6	42/6	17/6	42/6	20/-
1879	57/6	40/-	80/-	40/-	60/-	42/6	40/-	25/-	37/-	25/-
1880	65/-	52/6	85/-	60/-	70/-	55/-	50/-	30/-	47/6	35/-
1881	65/-	56/3	75/-	60/-	70/-	57/6	45/-	36/3	52/6	37/6
1882	62/6	47/6	65/-	40/-	55/-	45/-	42/6	17/6	43/9	30/-
1883	60/-	41/3	60/-	45/- ¤	.	.	37/6	17/6	40/-	23/9
							New Scale			
1884	47/6	27/6	42/6	27/6	45/-	37/6	30/-	16/3	27/6	18/9
1885	46/3	30/-	37/6	32/6	42/6	32/6	30/-	17/6	31/3	20/-
					New Scale					
1886	38/-	27/6	33/9	27/6	32/6	30/-	26/3	15/-	28/9	16/3
1887	38/9	30/-	35/-	27/6	.	.	27/6	13/-	25/-	13/9
1888	42/6	30/-	60/-	30/-	.	.	28/9	13/9	28/9	16/6
1889	50/-	30/-	45/-	30/-	.	.	31/3	15/-	32/6	20/-
1890	40/-	27/6	36/3	22/6	.	.	27/6	13/9	26/3	16/-
1891	42/6	32/6	40/-	32/6	.	.	28/9	17/6	26/-	17/-
1892	38/9	22/6	33/9	12/6	.	.	22/6	10/-	25/-	10/-
1893	30/-	22/6	30/6	20/-	.	.	20/-	13/-	19/6	14/6
1894	33/9	26/3	32/6	22/6	.	.	23/6	16/-	21/3	16/6
1895	30/-	21/3	30/-	18/6	.	..	18/6	11/6	20/-	12/-
1896	25/6	12/6	22/6	12/6	.	.	16/6	6/-	13/6	7/6
1897	28/9	15/-	32/6	15/-	.	.	18/6	8/-	19/3	9/-
1898	40/-	23/9	37/6	22/6	.	.	35/-	15/-	34/6	16/6
1899	33/9	22/6	31/3	25/-	.	.	19/3	14/-	22/6	15/-
1900	33/9	23/9	31/3	21/3	.	.	32/6	12/6	21/-	16/-
1901	26/3	20/-	25/-	19/6	.	.	18/-	10/-	17/3	11/6
1902	24/-	15/-	23/9	16/3	.	.	14/6	8/9	16/6	10/9
1903	25/-	20/-	21/3	17/6	.	.	17/6	12/6	18/6	14/-
1904	29/-	20/-	30/-	20/6	.	.	19/-	13/-	19/-	13/6
1905	25/-	16/3	25/-	17/-	.	.	17/-	10/-	17/-	12/6
1906	25/-	13/9	26/3	17/6	.	.	17/6	13/9	17/-	8/-
1907	25/-	20/-	20/-	18/9	.	.	18/6	11/-	18/9	13/3
1908	20/-	10/6	20/-	12/6	.	.	13/-	6/7½	14/-	6/6
1909	24/-	17/6	24/9	20/-	.	.	19/6	13/-	16/-	13/3
1910	24/6	18/9	24/-	13/6	.	.	19/9	15/-	17/6	9/7½
1911	27/6	21/3	32/6	21/3	.	.	19/-	13/6	18/6	14/-
1912	35/-	27/6	36/3	27/6	.	.	23/-	19/-	25/-	17/9
1913	33/-	22/6	33/-	20/6	.	.	19/-	12/-	20/7½	13/6

ø Karachi Scale - 18 cwt.

¤ Freight Rates on Jute from Calcutta - 1884 per ton (20 cwts) and not To Calcutta Scale.

(APPENDIX B, TABLE B-1.)

a) The mean yearly freight rates on certain goods carried by steamers from the undermentioned ports to the U.K, and (b) the percentage fluctuations in such rates, 1900 = 100.

(*a.*) Mean Yearly Freight Rates.

Port whence shipped	Calcutta.	Calcutta.	Rice Ports.	Java.	Australia.	New Zealand.	New Zealand.
Class of Goods	Jute.	General Cargo.	Rice.	Sugar, Rice, &c.	Frozen Mutton.	Frozen Mutton.	Grea... Wool.
Scale	Per Ton Calcutta Scale.*	Per Ton Calcutta Scale.†	Per Ton.†	Per Ton Java Scale.*	Per Lb.‡	Per Lb.‡	Per Lb.‡
Year.	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*d.*	*d.*	*d.*
1884	37 6	—	—	42 6	2	2	¾ and 5/16
1885	35 0	38 10	38 11	40 0	1½	2 and 1¾	¾ and 5/8
1886	30 7½	30 11¼	33 7	33 9	1¼	1½	⅝
1887	31 3	31 6	35 8½	36 3	1	1¾ and 1½	¾ and 5/8
1888	45 0	34 1	35 2	42 6	⅞	1½ and 1¼	¾ and 5/8
1889	37 6	38 6¾	39 8	47 6	1	1½ and 1¼	¾ and 5/8
1890	29 4½	31 10¾	33 3½	37 6	1¼	1½, 1¼, and 1	¾ and 5/8
1891	36 3	33 10½	36 6¾	38 9	1	1½, 1¼, and 1	¾ and 5/8
1892	23 1½	28 2¾	28 7¼	32 10½	⅞	1⅛, 1, and ⅞	¾ and ½
1893	25 3	25 10½	27 1½	31 10½	⅞	1⅛, 1, and ⅞	¾ and ½
1894	27 6	28 1½	29 2¾	33 9	⅞	1	¾ and ½
1895	24 3	23 1½	25 8½	28 9	¾	1, 1/16, and ¾	¾ and ½
1896	17 6	17 9	19 3¾	24 4½	⅝	1, and ¾	¾ and ½
1897	23 9	19 11¾	20 5¼	27 6	9/16	1, ¾, and ½	⅝ and ½
1898	30 0	28 2½	29 6	32 6	9/16	¾ and ½	½
1899	28 1½	28 8½	27 10½	31 3	9/16	¾ and ½	5/8, 9/16, and ½
1900	26 3	27 0½	28 5¼	32 10½	9/16	¾ and ½	7/16
1901	22 3	21 3½	22 5¾	25 10½	½	¾ and ½	⅜
1902	20 0	19 2	20 10¼	22 6	½	¾ and ½	7/16
1903	19 4½	19 5	22 1	24 0	½	¾ and ½	⅜

(*b.*) Percentage Fluctuations as compared with the year 1900.

1884	143	—	—	129	356	320	157
1885	133	144	137	122	267	300	157
1886	117	114	118	103	222	240	143
1887	119	116	126	110	178	260	157
1888	171	126	124	129	156	220	157
1889	143	142	139	144	178	220	157
1890	112	118	117	114	222	200	157
1891	138	125	129	118	178	200	157
1892	88	104	100	100	133	160	129
1893	96	96	95	97	156	160	129
1894	105	104	103	103	156	160	129
1895	92	86	90	87	133	137	129
1896	67	66	68	74	111	140	129
1897	90	74	72	84	100	120	129
1898	114	104	104	99	100	100	114
1899	107	106	98	95	100	100	129
1900	100	100	100	100	100	100	100
1901	85	79	79	79	89	100	86
1902	76	71	73	68	89	100	100
1903	74	72	78	73	89	100	86

* Rates extracted from circulars issued by Messrs. Angier Brothers, London.
† " " " " " " " Cairns, Noble & Co., Newcastle-on-Tyne.
‡ Rates supplied by firms maintaining regular services of vessels in these trades.

SOURCE: PARLIAMENTARY PAPERS, VOL. LXXXIV, 1905, P. 328.

APPENDIX "B" (Table B-1) Ref: Parliamentary Papers Vol. LXXXIV - 1905, p.330

U.K. Outward Freight Rates (Eastern Route 1884-1903)

((a) the Mean Yearly Freight Rates on certain classes of Goods carried by Steamships from the United Kingdom to the undermentioned Ports during each of the 20 years, 1884 to 1903; and (b) the Percentage Fluctuations in such Rates as compared with the year 1900.)

(a). Mean Yearly Freight Rates.

Port to which Shipped	New Zealand	New Zealand	New Zealand
Class of Goods.	Fine Rate (Fine Textiles etc.)	Medium Rate (Wines, Spirits, Seeds, etc.)	Rough Rate. (Furniture, Hardware etc.)
Scale	Per Ton of * 40 Cubic Feet	Per Ton of * 40 Cubic Feet.	Per Ton of * 40 Cubic Feet
Year	s. d.	s. d.	s. d.
1884	75 0	65 0	60 0
1885	65 0 to 70 0	55 0 to 60 0	45 0 to 50 0
1886	70 0	60 0	50 0
1887	70 0	60 0	50 0
1888	70 0	60 0	50 0
1889	80 0	70 0	60 0
1890	80 0	70 0	60 0
1891	45 0 to 70 0	37 6 to 60 0	30 0 to 50 0
1892	45 0 to 70 0	40 0 to 60 0	35 0 to 50 0
1893	40 0 to 42 6	37 6 to 40 0	30 0
1894	42 6	40 0	30 0
1895	50 0 to 55 0	40 0 to 45 0	30 0 to 35 0
1896	55 0	45 0	35 0
1897	55 0	45 0	35 0
1898	55 0	45 0	35 0
1899	55 0	45 0	35 0
1900	55 0 to 60	45 0	35 0 to 40 0
1901	60 0	45 0	40 0
1902	60 0	45 0	40 0
1903	60 0	45 0	40 0

(b) Percentage Fluctuations as compared with the year 1900

1884	130	144	160
1885	117	128	127
1886	122	133	133
1887	122	133	133
1888	122	133	133
1889	139	156	160
1890	139	156	160
1891	100	108	107
1892	100	111	113
1893	72	86	80
1894	74	89	80
1895	91	94	87
1896	96	100	93
1897	96	100	93
1898	96	100	93
1899	96	100	93
1900	100	100	100
1901	104	100	107
1902	104	100	107
1903	104	100	107

* Rates supplied by a firm maintaining a regular service of vessels in the trade.

TABLE (B - 1)

U.K. Outward Freight Rates

Rates of freight in Coal Trade from Wales to Bombay 1870-1913

Per Ton or 20 cwt.

Year	Highest Rate	Lowest Rate	Average *
1870	32/-	25/-	28/6
71	30/-	22/-	26/-
72	28/-	23/-	25/6
73	30/-	24/-	27/-
74	29/-	22/-	25/6
75			
76	23/-	18/-	20/6
77	24/-	17/6	20/9
78	37/6	23/-	30/3
79	30/-	25/-	27/-
80	27/6	20/-	23/9
81	20/-	14/6	17/3
82	22/-	14/6	18/3
83	19/6	14/6	17/-
84	19/6	14/6	17/-
85	18/-	14/3	16/1½
86	16/-	12/6	14/3
87	24/6	14/-	19/3
88	25/-	18/6	21/9
89	21/-	14/9	17/10½
90	18/6	13/-	15/9
91	13/3	6/9	10/-
92	13/-	8/6	10/9
93	12/-	7/6	9/9
94	12/-	6/9	9/4½
95	12/6	7/3	9/10½
96	19/-	11/-	15/-
97	20/6	10/6	15/6
98	17/6	11/-	14/9
99	17/-	11/-	14/6
1900	30/-	14/6	20/9
01	15/-	9/-	12/-
02	13/3	8/3	10/9
03	10/-	8/3	9/-
04	10/6	6/-	8/3
05	11/6	6/6	9/-
06	12/3	8/-	10/1½
07	11/6	8/-	9/9
08	14/3	9/6	11/10½
09	9/9	7/-	8/4½
10	11/-	7/6	9/3
11	12/-	8/9	10/4½
12	15/-	9/3	12/-
13	14/6	10/6	12/6

Compiled from R.A.V.'Angler' "Fifty Years' Freight" Published in London, 1920

* Statistical Tables Published by Angler had only stated the highest and lowest rates quoted during the course of any year.

APPENDIX B (TABLE B-2)

Tonnage built in U.K. for foreigners in some selected years.

Per cent in total tonnage output of U.K.

Year	Germany	Norway	Russia	Austria	Spain	Denmark	Holland	France	Others ø	Approx. Total
1893	3.6	2.1	1.2	1.2	x	x	x	x	6.9	15
1895	3.0	4.2	3.0	x	2.2	1.5	1.5	x	4.6	20
1896	10.0	2.4	3.0	x	x	2.2	x	x	12.4	30
1900	7.2	x	x	5.5	1.3	x	1.6	1.3	6.1	23

Compiled from the Economist' supplement, Comm. History and Review, in the respective years.

ø Others, including unspecified European countries, British Colonies and other foreign countries, mainly Japan.

x Unspecified.

Also, Bowley, A.L. (Foreign Trade in the 19th Century), mentioned that in 1870 all the steamers of the North German Lloyd's, 60% of the Austrian Lloyd's, and 8/9 of the Egyptian Azizieh Line were of English construction.

APPENDIX B. (TABLE NO. B - 3)

(a) Suez Canal - European Traffic (in Thousand Tons). (1869-1913)

Year	France	Netherlands	Germany	Italy	Austria & Hungary	Spain	Norway	Russia	Total
1870	85	-	-	6	19	1	-	1	112
1875	226	131	46	80	92	44	21	25	665
1880	275	173	54	105	116	86	11	47	868
1885	574	252	199	159	120	59	38	47	1.448
1890	366	249	491	144	118	70	57	35	1.530
1895	673	366	694	146	166	96	109	87	2.337
1900	752	507	1,466	159	341	110	68	307	3.710
1905	884	578	2,113	190	458	75	116	177	4.591
1910	835	855	2,564	218	645	71	46	288	5.518
1913	928	1,287	3,352	291	846	76	93	341	7,214

(b) Net Tonnage (Steam only) of European Countries which had traffic in the Suez Canal (1869-1913)

Year	France	Netherlands	Germany	Italy	Austria & Hungary	Spain	Norway	Russia	Total
1870	154,400	19,500	82,000	32,000	50,000	x	13,700	x	351,700
1880	277,800	64,400	215,800	77,000	64,000	233,700	58,100	100,400	1,091,200
1890	499,900	128,500	723,700	106,600	97,900	407,900	203,100	234,400	2,402,000
1900	527,600	268,400	1,347,900	376,800	247,000	679,400	505,400	417,900	4,370,400
1905	711,000	356,900	1,915,500	484,400	366,000	685,700	668,200	440,600	5,628,300
1910	815,600	488,300	2,396,700	674,500	477,600	744,500	897,400	535,000	7,029,600

CHAPTER IV

THE EFFECT OF THE OPENING OF THE CANAL ON THE DEVELOPMENT OF BRITISH TRADE WITH EASTERN EMPIRE 1869-1913.

APPENDIX C - BRITISH RE-EXPORTS OF THE PRODUCE OF THE EASTERN EMPIRE, 1855-1913.

APPENDIX D - THE TRADE POLICY OF EASTERN EMPIRE DURING THE PERIOD 1869-1913.

A - THE DEVELOPMENT OF BRITISH IMPORTS FROM EASTERN EMPIRE. (1869 - 1913)

First: The Development of the Imports Directed for Re-Export Purpose.(1)

In reviewing the British/E.E. trade for the period which ended 1869 in Chapter 2 - we saw that imports of Indian cotton for British consumption began to diminish rapidly for several reasons from the late 1860's. For the same reasons such a trend was maintained after 1870. After the opening of the Suez Canal British imports of Indian cotton for re-export purpose had also started to decline.(2) An Italian or an Austrian cotton spinner who formerly depended on London or Liverpool to get the raw material he wanted within fourteen days was now able to arrange his business directly with India and to obtain his requirements within a similar time. The annual report on Indian trade, as it appeared in the papers

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(1) See Appendix "C" for the statistical methods which I have used in estimating the value of British re-exports of the produce of E.E. during the period 1855-1913.

(2) Re-exports of Indian cotton began to decrease heavily immediately after the end of the American civil war of the 1860's. Nevertheless it is the long term trend of that trade, i.e., before and after the American war, which has been taken into consideration when measuring its decline after the opening of the Canal.

presented to Parliament, paid frequent attention to the rapid growth of direct exports of cotton after 1869 to France, Italy, Austria, Germany, Russia and other European countries. At the same time the report showed that such a trend had always meant diminished exports of this item to the mother country. The report stated: "the explanation was that in England Indian cotton had been used in a decreasing degree since the Indian mills entered upon effective competition with the Lancashire mills in the spinning of the lower counts for which the Indian cotton was mainly used. What was shipped to England was to a very large extent re-shipped to the continent and now it is going direct to the continent from India to the saving of freight and other charges." (3)

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(3) Parliamentary Accounts and Papers Vol.LXVI.1893. Also see the Economist, March 11, 1876, see Commercial History and Review of 1875 for a paper on "the Effect of the Suez Canal (1870-74) on the Shipping Trade, and on The Commerce between India and England and India and the Rest of Europe". This paper was prepared by Charles Magniac and read by him before the Indian Section of the Society of Arts, on 18th Feb., 1876.

The decline in British imports of coffee was also connected with the growth of direct exports of that item from Ceylon and India to Europe after 1869.(4) Furthermore, such decline was bound to happen in a drastic manner as the re-export ratio of coffee imports was as high as 80% - or above - by that time. However as Ceylon, of all the British Empire in the East, was the main supplier of coffee to the mother country one must be careful not to attribute the decline in the imports of this item solely to the decline of re-export trade. Hemileia Vastatrix, a coffee disease started to attack coffee plantations in Ceylon in 1869 and subsequently the coffee area in that colony shrank to only about 5,000 acres by the early 1880's compared with 176,000 acres at the beginning of the trouble.

Indigo, and also other kinds of dyestuffs, several types of oilseeds, silk, hides and spices were all imported from India, Straits Settlements, Malaya and Ceylon to be mainly re-exported to the continent of Europe. These trades were therefore bound to be affected by the fall in freight and by other incentives which the shortening of the Eastern voyage gave to the

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(4) Imports of coffee from the Eastern Empire were also affected during the same period by the growing competition of Brazilian coffee.

Europeans to buy their requirements directly from the East.[5] This trend was the general case, after the opening of the Canal in 1869, for most of the Eastern goods which for centuries had constituted a major part in the British re-export trade. Imports of rice from the E.E. were also similarly affected although to a lesser extent. Between 1870 and 1880 imports of rice rose considerably and out of them the re-exported portion increased from 50% (average of 1865-69) to 63% in 1870-74 and then dropped to 61% in 1875-79, which however was still relatively high. During these ten years rice imports from E.E. (mainly India) were still suitably, as well as economically, carried by sail via the Cape route, rather than by steamers via Suez.[6] Thus, it is very likely that the British ownership of a large sailing fleet operating on the Cape route had played a significant part in protecting this particular entrepot trade from the new European competition. After 1880 and until 1913 imports of rice, by value, were declining and meanwhile the percentage which was retained for internal consumption was progressively growing so that by 1910-13 re-export ratio of rice imports was only 24%.

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(5) Imports of coffee from the Eastern Empire were also affected during the same period by the growing competition of Brazilian coffee.

(6) "Return of the Board of Trade", Accounts and Papers, Vol.LXIV-1883.

Tea was also one of the commodities whose imports from India and other parts of E.E., mainly Ceylon, had increased to a very great extent, throughout the examined period, by volume as well as by value. Undoubtedly, the success of tea plantations in India and in Ceylon, the continuous expansion of these plantations and the substitution of their tea instead of Chinese tea in the British market were most significant in explaining such a rise in tea imports therefrom. However, the continuous fall in prices of imported tea, except between 1900 and 1913, was in part due to the saving in freight rates. Shipments of tea from E.E. into Britain came by the Suez Canal route from the early 1870's and continued to depend upon it in the following years.(7) But since the Suez Canal had also served the growth of the European trade with India, British re-exports of tea to them were bound to decline. The re-exported percentage of tea imports declined from 24% in 1870-74 to 19% in the next quinquennial period. In 1880-84 the percent rose again to 23%, but once more it started to decline and by 1895-99 it was only 14%. Yet, the actual value of re-exports of tea was rising throughout due to the considerable rise in its imports from India and Ceylon.

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(7) See reference given in Footnote (6)

Besides, since the turn of the century, it seems that the rise in tea prices had encouraged the British merchants to carry larger amounts of tea from India and Ceylon for re-export trade. Thus with a little rise in tea prices in 1900-1904, over the average of 1895-99 re-exports of tea as a percentage of tea imports, rose to 18% and with further rise in prices it increased once more to reach 20%.

We now turn to consider the development of wool imports from E.E. which, in fact, had taken a somewhat different course from the previous cases. Between 1870 and 1895, Britain increased her imports therefrom by 394.158 million lbs, i.e., from 186,225 million lbs in 1870 to 580,383 million lbs in 1895, and only by 117.670 million lbs from all other places, i.e., from 77.326 million lbs in 1870 to 194.996 million lbs in 1895. The largest quantities of E.E's wool, and also of all British wool imports (See Diagram 2) were provided by Australasia where this fibre was produced at a cheaper cost than in any other place in the world. Such a fast growth of wool imports was, yet, significantly owed to the success of the British merchants in increasing their re-exports. The re-exported percentage of wool imports rose from 39% in 1865-69, to 52% in 1875-79 and then to 60% in 1880-85. No doubt Britain's re-exports of the cheaper Australian wool were further stimulated

after 1869 by the fall in freight rates.[8] It will be borne in mind that this fall in freights charged on the Australian voyage, although caused by the opening of the Canal, was, for many years, particular to sailing vessels which used the Cape route, and it was Britain which possessed the largest fleet of this type of vessel. Thus until the early 1890's a considerable amount of wool came from Australasia to Britain by sailing vessels and European countries still found it cheaper to get their requirements of this fibre through the British market.[9] Yet, the dependence upon the Canal route for shipments of Australian wool was probably a little earlier than for wheat. In the early 1880's the steamers of the P. & O. and Orient Steam Companies were travelling fortnightly to Australian ports via the Suez Canal with full cargo and passengers and returned to Britain by the same route with full cargo of wool and other goods such as leather, tallow, tin and copper.[10]

(8) See page 224, in J.H. Clapham's "An Economic History of Modern Britain, Free Trade and Steel (1850-86)".

(9)..."in spite of direct trade between Australia and the continent of Europe, the United Kingdom still remains the chief entrepot of this staple (wool), with a larger export of foreign and colonial wool than before"...Journal of the Royal Statistical Society, Vol.LXI 1898. March. An article titled "The Recent Course of Trade within the British Empire", by J.A. Baines, see pages 25 and 40.

(10) Rabino, J. "The Statistical Story of the Suez Canal", in Journal of Royal Statistical Society 1887.

In fact shipments of wool by steam via the Canal were very useful when rapid deliveries were necessary in London market.

Direct steam communications between the continent of Europe and Australasia were begun during the 1880's but there is no evidence that they represented any real threat to Britain's entrepot trade of Australian wool before the turn of the century. During 1885-89 Britain's re-exports of wool, as a percentage of imports of this fibre fell by 4%, from the high level of 1880-84, at the same time when the subsidised French and German steamers increased their shipments of wool from Australian ports. But, there was no change in this situation during 1890-94 and Britain still re-exported 56% of her total wool imports, mainly to Europe. In the period 1895-99, the percentage re-exported of wool imports fell by 7%, but this could partly be explained by the smaller quantities which Britain imported from Australia because of the severe dreughts which destroyed crops, flocks and herds and reduced considerably Australian wool production. Yet, after the turn of the century it became evident that European steamship firms trading with Australia via the Canal had somewhat changed the old situation of Britain as the chief entrepot of Australian wool and by 1910-13 British re-exports of this fibre had decreased and represented only 41% of its imports.

Jute imports from India were considerably stimulated during the selected period by the fall in freight rates as well as by the rapidly rising demand for gunny bags which accompanied the rise in world trade of grain. Scotland, the main consumer of jute in Britain, took a quantity of this commodity amounting to about 73,600 cwts per week in the early 1880's.(11) As was the case in wool such a huge amount of jute which Britain consumed had no doubt enabled her to import cheaply further amounts for re-exports. The percentages which Britain re-exported of Indian raw jute rose from 18% in 1870-74 to 27% in the next two quinquennial periods and then to 35% in 1885-89. It must be mentioned here that such a striking growth in British re-exports of Indian jute during the twenty years which followed the opening of the Canal was also accomplished by using sailing vessels via the Cape route.(12) Although the re-exported percentage of raw jute imports declined slightly to 34% and 33% in 1890-94 and 1895-99, respectively, it rose again to an average of 37% in the rest of the period. Such a rise in the percentage of Indian jute re-exported during this latter period, i.e., in 1900-13 was quite significant for re-export trade, as general imports of this fibre (from India) rose from £4.1 millions in 1900 to £9.3 millions in 1913. Yet, such a rise in value of

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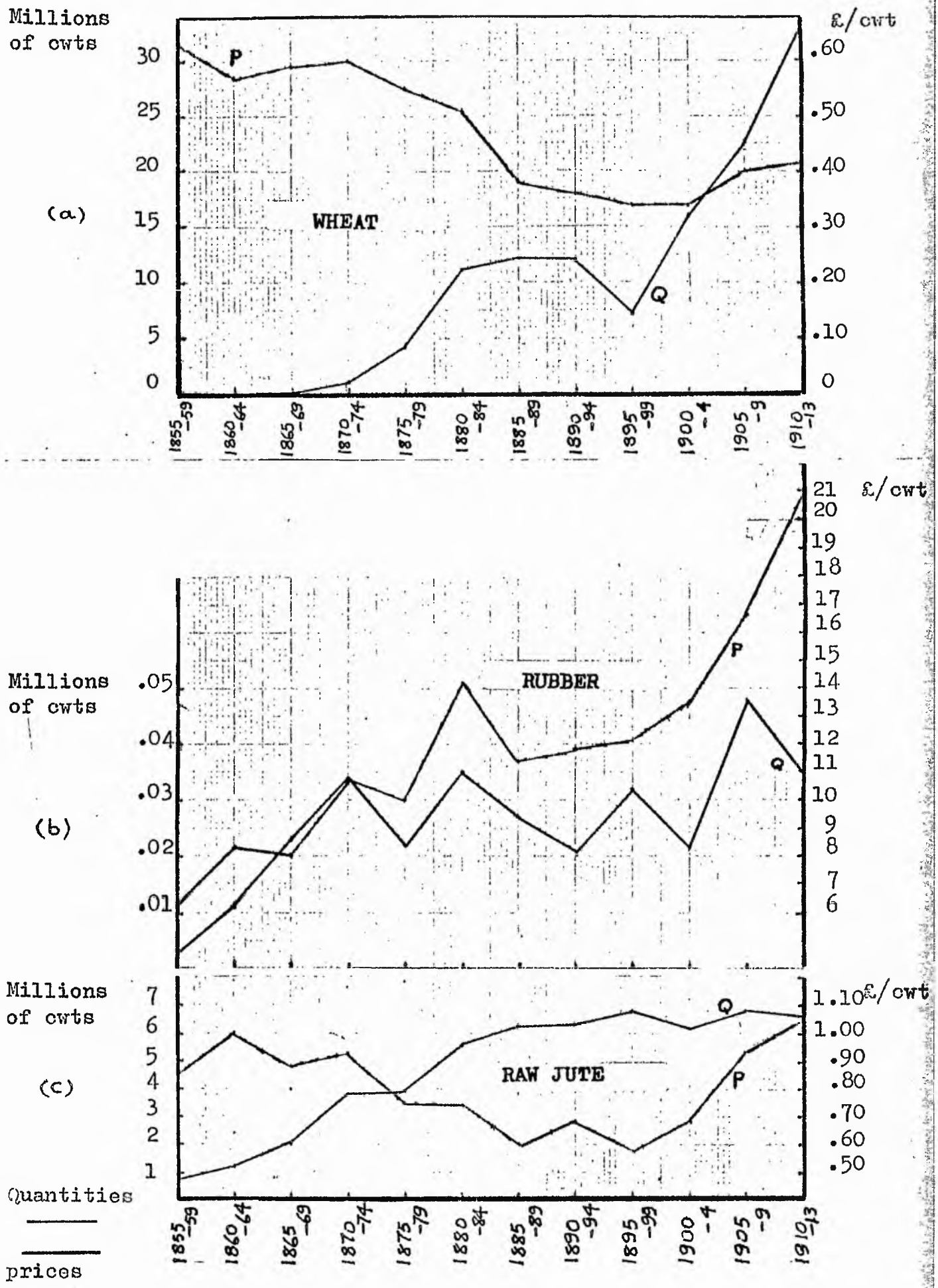
(11) L.C.A. Knowles, The Economic Development of the Overseas Empire, page 88.
(12) See reference given in foot-note (6).

DIAGRAM (8)


Millions of cwts
Price £/cwt
(a)
WHEAT
P
Q
30
25
20
15
10
5
0
.60
.50
.40
.30
.20
.10
0
1855-59
1860-64
1865-69
1870-74
1875-79
1880-84
1885-89
1890-94
1895-99
1900-4
1905-9
1910-13
Millions of cwts
£/cwt
(b)
RUBBER
P
Q
.05
.04
.03
.02
.01
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
Millions of cwts
£/cwt
(c)
RAW JUTE
Q
P
7
6
5
4
3
2
1
1.10
1.00
.90
.80
.70
.60
.50
Quantities
prices

QUANTITIES "———" DIAGRAM (8). PRICES "———"

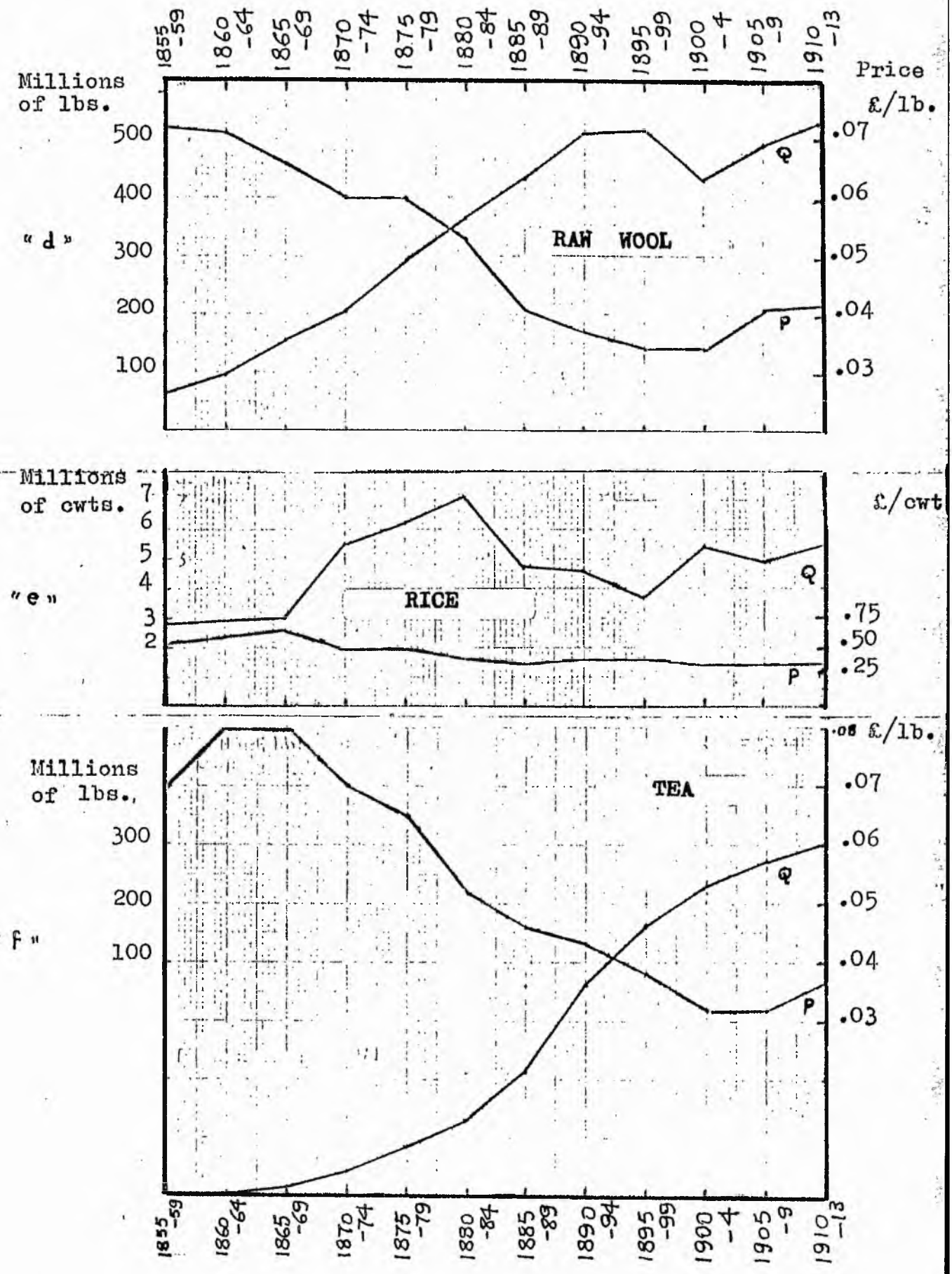
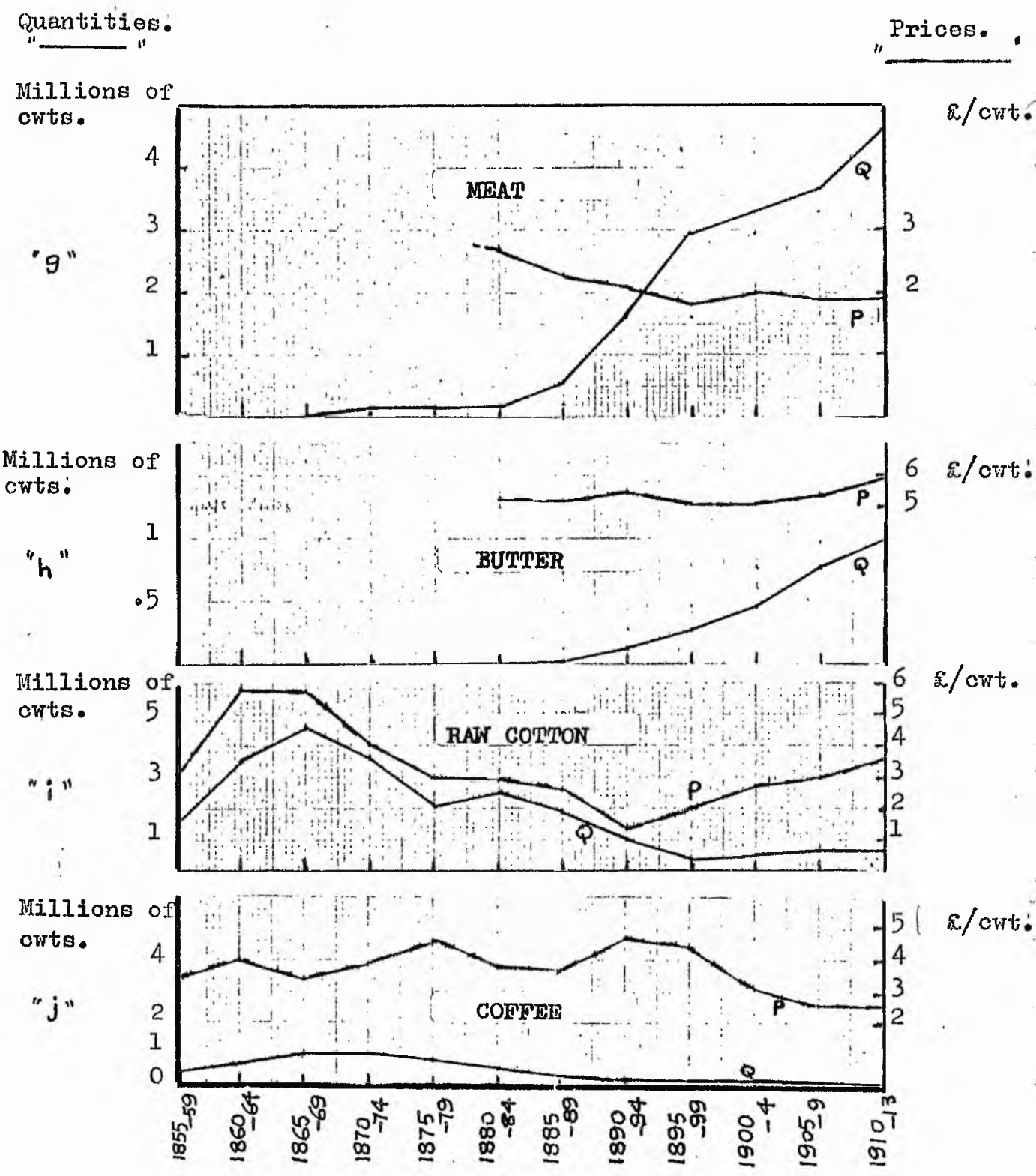


DIAGRAM (8).


Quantities.
"——— "
Prices.
"———"
Millions of cwts.
£/cwt.
"g"
MEAT
Q
P
"h"
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"i"
RAW COTTON
"j"
COFFEE
1855-59
1860-64
1865-69
1870-74
1875-79
1880-84
1885-89
1890-94
1895-99
1900-4
1905-9
1910-13

DIAGRAM (8).

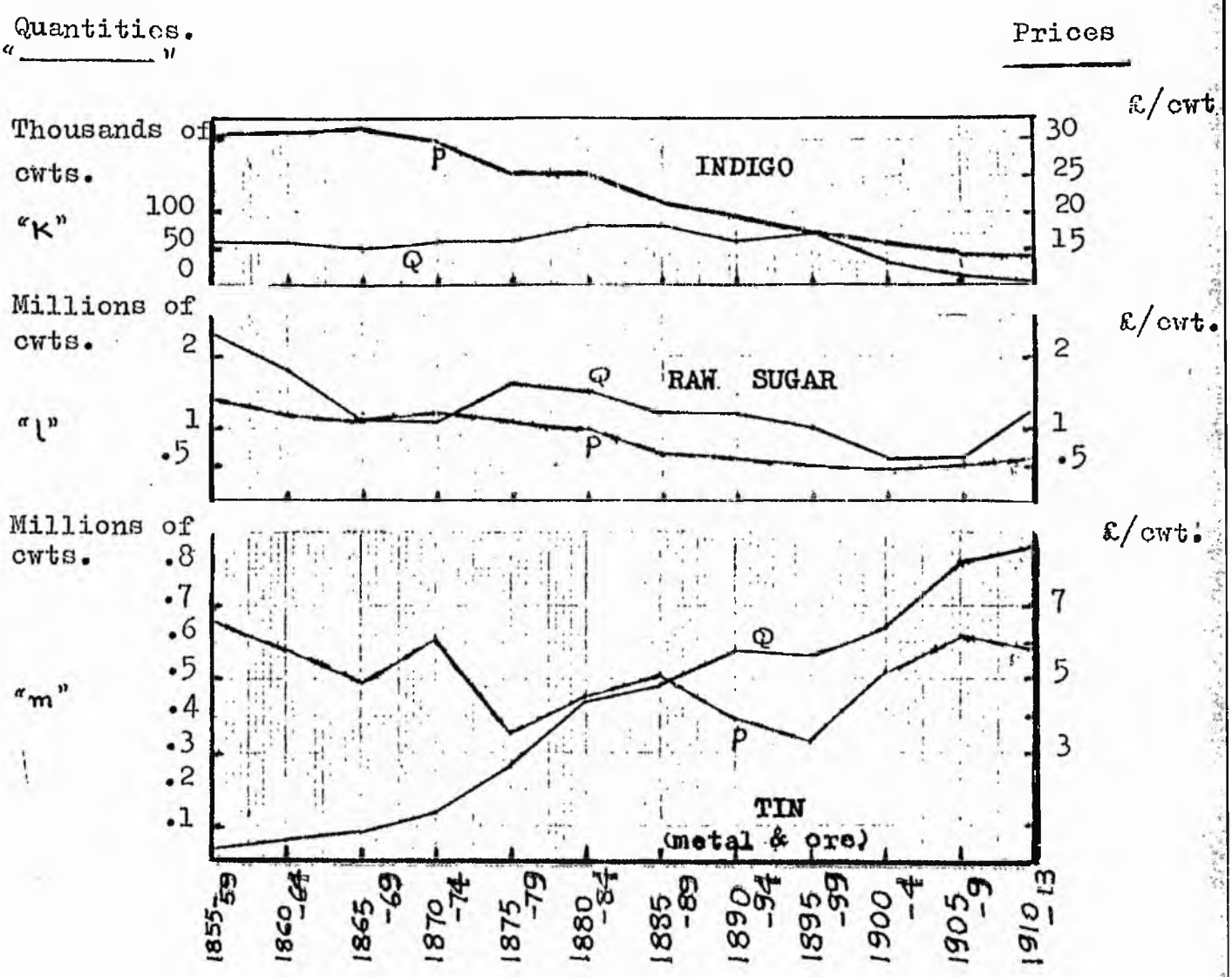

Diagram (8).

Quantities and prices (quinquennial averages) of wheat, rubber, jute, wool, rice, tea, meat, butter, cotton, coffee, indigo, sugar and tin imported from Britain's Eastern Empire between 1855 and 1913.

Indian jute imports was only matched by a very small one in terms of volume. It was almost totally due to the rise in jute prices, see Diagram (8-c). The growth of jute industry in India was an important factor to be considered when explaining why imports of this fibre had grown at a much slower rate since the mid 1880's, in spite of a rise in demand in Britain and Europe.

Other re-export trades which Britain succeeded not only in maintaining but also in developing considerably during 1869-1913, were those of tin and rubber. While imports of these raw materials showed a very notable increase during the examined period, re-exported percentages were also rising continuously. Of tin imports in 1870-74, a portion equal to 24% was re-exported and by 1910-13 this had risen to reach 58%. Re-exported percentage of rubber also rose from 36% in 1870-74 to about 70% in 1910-13. Within E.E. itwas the Straits Settlements which mainly supplied Britain with rubber, while some small quantities came from India, Mauritius, Ceylon and Aden. From 1905 British statistics specified some quantities of rubber coming from Sarawak, East African Protect., B.N. Borneo and Federated Malay States, and of these new sources the largest portion came from the last one. As regards tin, the Straits Settlements again provided the largest portion to the mother country and then was followed by Australia. In all these dominions

and colonies, but particularly in the Straits Settlements, huge amounts of British capital were invested in rubber plantations and in tin mining as well as in their export businesses.(13) Hence, we may find in this situation an explanation for the considerable growth of British imports of tin and rubber from these sources and also for the monopolistic share which the British still held in their re-export trade in spite of the growth in direct European trade in the East.(14)

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(13) See G. Paish, "Great Britain's Capital Investment in Individual Colonial and Foreign Countries", Journal of Royal Statistical Society, Jan., 1911. Paish attributed the heavy investment in rubber plantations in the Straits Settlements and in Federated Malay States during the early years of the 20th century to the development of motor car industry in Britain and in other countries.

(14) It is also probable that the fall in tin freight rates had stimulated the demand for this commodity. If we look at Diagram (8-m) we will find that the average prices of tin had declined in four quinquennial periods; 1875-79, 1890-94, 1895-99 and in 1910-13. Although the data which I have been able to obtain on freights during the period 1869-1913 are very insufficient, there is some evidence to support the statement that the fall in prices of tin during these periods, and in particular during the 1890's, was partly due to the savings in freight.

Second: The Development of the Imports Conducted for British Consumption.

Trade returns for the period under review showed that Britain's imports for home consumption from E.E. had not only grown as a percentage in general imports from that source, but also in absolute terms. In most of the cases these imports were stimulated by the improved system of transport as well as by the great fall in freight rates in the Eastern route. And, unlike imports which came from E.E. for purposes of re-export, these were not hindered by the growth of direct European trade with East of Suez after the opening of the Canal.

However, the most significant development in this respect was that of imports of wheat, meat, butter and several other kinds of fresh foodstuffs from E.E. sources. Following the great fall in freight rates after 1869 India and Australasia were enabled to export their wheat into the British market and to compete against American and European wheat. The decline in freight rates in the Australian voyage, as it has beem explained, was mainly consequent upon the substitution of steam for sail following the opening of the Canal, and therefore lower prices of wheat imported from Australia were not necessarily correlated to the use of the Suez Canal to the British Market. Until the 1880's the bulk of wheat of Australia and New Zealand came to Britain by sailing vessels via

Cape Horn and until 1913 this route was still considerably used. Yet the case of imports of Indian wheat was different. From 1869 to 1913 lower freight charges, and consequently lower prices for Indian wheat were only obtainable in the British marke t when the Canal route was depended upon. Further-more, the Canal enabled Indian wheat to be delivered in good condition in the British market. To export it from India before the days of the Canal meant that it had to travel through the tropics twice and as wheat was apt to heat, the quality was likely to deteriorate. Hence it would be expected that the efficiency of the Suez Canal in serving the increasing traffic and the Canal dues were very important factors in determining the importations of Indian wheat into Britain. When the Board of Trade attempted in 1881 (15) to assess the value of the Canal to British trade it was stated that all Indian wheat came via the Suez Canal. Although there are no data to support that this dependence was maintained until 1913, there is a very good reason to suppose this, since the growing dependence of Indian trade with countries West of Suez on the Canal route was never interrupted throughout. Except for three years during the last quarter of the 19th century, U.S.A. had persistently been the largest source from which Britain

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(15) See reference given in Footnote (6).

obtained her requirements of wheat and the second source was E.E. (the largest portion came from India) or Russia, followed by Argentine and B. North America. In the first thirteen years of the 20th century Britain continued to buy larger and larger amounts of Indian and Australian wheat and the years marked with red points in Diagram (9) indicate those years in which E.E. became most important source of supplying wheat into Britain. It can also be seen on the same diagram, that since 1880 E.E. had frequently occupied the second position, those are the years marked with squares, among different sources from which Britain imported her needs of this foodstuff.

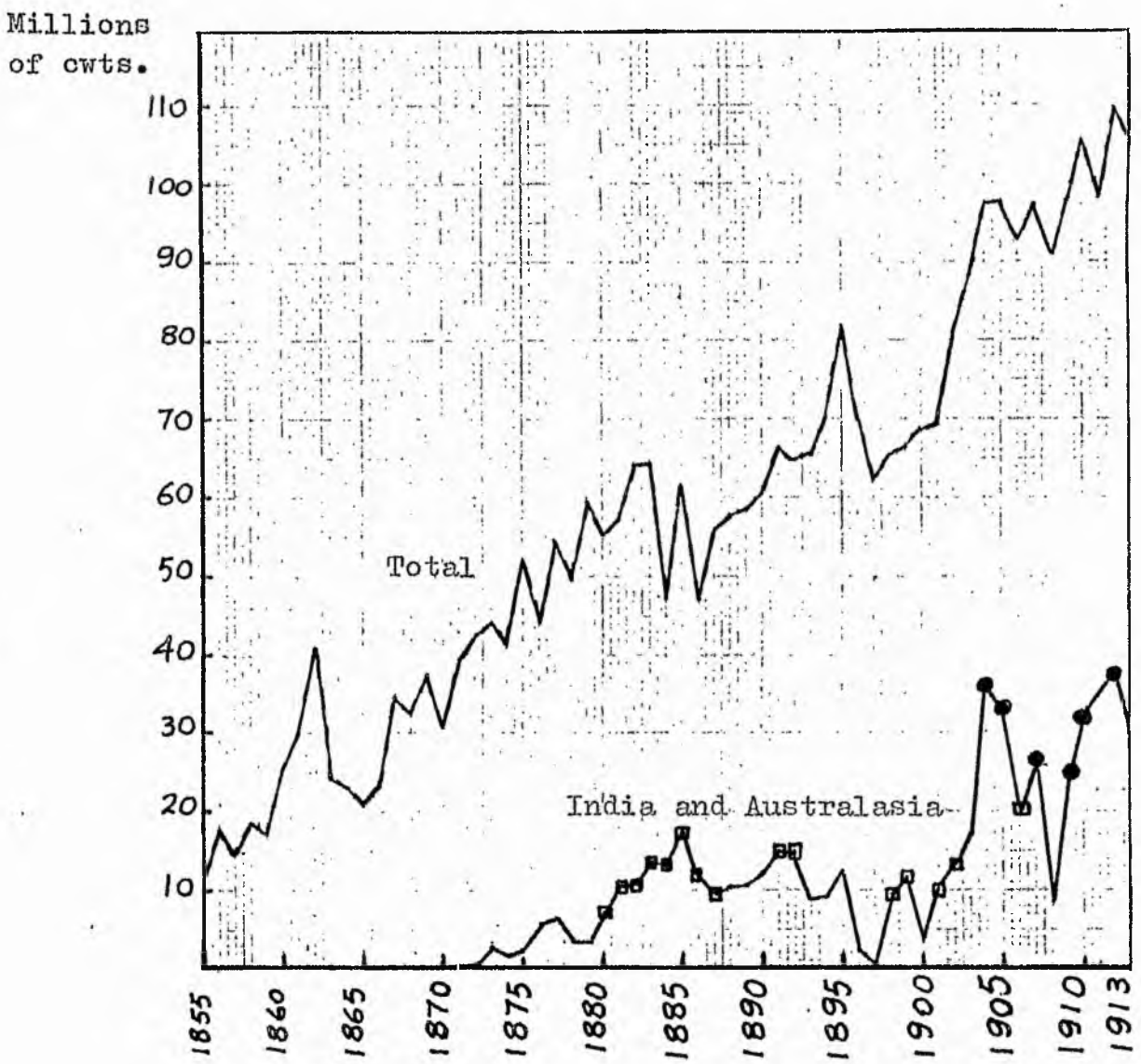
Growth of meat, butter, margarine and cheese imports from Australia and New Zealand was only made possible in the late 19th century by three factors; the development of technical methods of preserving food by freezing, the saving in the time spent at sea to Australia by using the Suez Canal and by the employment of speedier steamships. Unlike wheat imports from Australasia, fresh foodstuffsimports into Britain were therefore served by the Canal route from the beginning.

DIAGRAM (9).

BRITISH IMPORTS OF WHEAT (1855 - 1913)

* Total Imports of Wheat ————

* Imports from India , Australia and New Zealand. ————



The Change in the Structure of British Import Trade with E.E.

Diagram (10) shows that a considerable part of the articles which played a significant part in the British imports from E.E. in 1870 had declined drastically in importance by the end of the period. Raw cotton, coffee, indigo, hides, sugar (16) and rice constituted 50% of the value of general imports from E.E. in 1870 and only about 4% in 1913. Different kinds of oilseeds, silk and spices had also been important items in the beginning of the period but by 1913 their imports had also decreased in a similar manner. These were the trades which Britain

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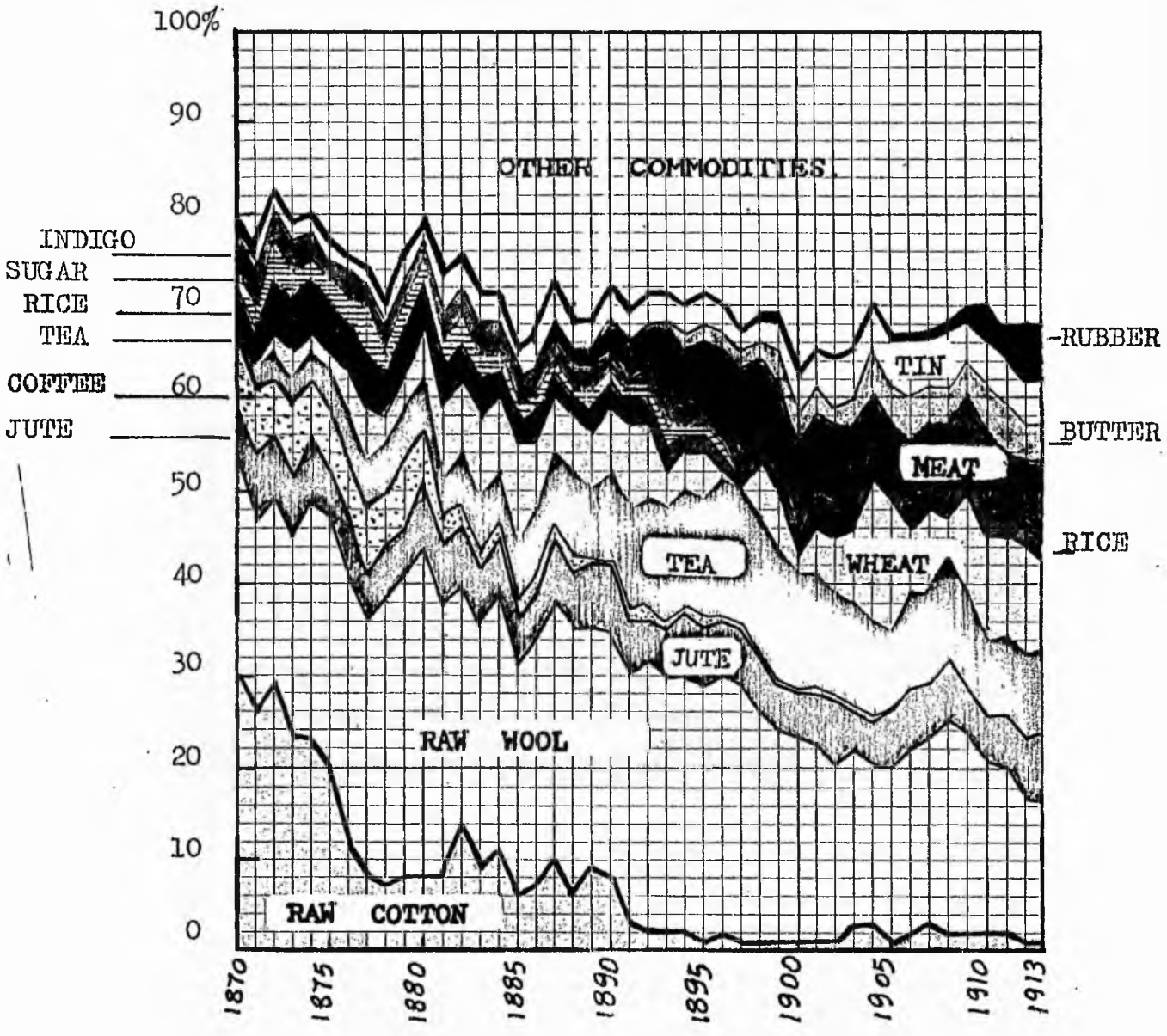
(16) During the last quarter of the 19th century sugar imports from Mauritius were seriously reduced (Diagram 4-b) and yet in that period the colony's direct exports to Europe did not increase and even declined sometime. In fact the decrease in Mauritius' principal trade was due to two other factors. First, after the opening of the Suez Canal, Mauritius was no longer situated along the most frequent route to India and this did not only affect its revenues from ships calling at its port but also affected her trade in general. Second, during the period under review skill and industry had done their utmost in growth and manufactures of beet and in reducing remarkably its price while much less was done to extract completely the much larger per cent of sugar contained in cane. Consequently Mauritius and also in this respect other cane producing countries, suffered a set back in their sugar exports.

DIAGRAM (10).

THE CHANGE IN THE STRUCTURE OF BRITISH IMPORTS FROM EASTERN EMPIRE. (1870 - 1913)



*The relative importance of different articles are given in terms of percentages in the total value of Britain's imports from her Eastern Empire.

conducted mainly for purposes of re-export before 1869. On the other hand some articles which had not figured at all in Britain's imports from E.E. before the seventies such as meat, butter and wheat now constituted 22%, by value, in 1913. In a similar way imports of fresh vegetables, cheese, margarine and several kinds of grains had grown in importance, between 1870 and 1913. Imports of wheat and fresh foodstuffs were almost completely for home consumption. As the Diagram shows, raw wool still occupied by 1913 a large portion in the value of total imports from E.E. Yet, such portion had been highest during the late 1870's and the 1880's and then it started to decline and by 1913 was less than it was in 1870. Imports of tin, rubber and tea which had been of minor importance in this particular trade until the 1870's, grew considerably after that until 1913. Imports of rubber had shown a rapid growth only in the early years of the 20th century (see the diagram) while those of tea and tin grew steadily throughout the period. Similar to the rising trend of tin but to a lesser extent, was the case of imports of lead, copper, zinc and manganese from E.E. to Britain. A final conclusion drawn from Diagram 10 is the case of raw jute of which the importance in general imports from E.E. had, broadly speaking, stayed constant throughout.

These observations made from Diagram (10) for the changing structure of Britain's imports from her E.E. can be further illustrated by the use of Diagram (8) which shows the movements of volumes and prices of the several articles included in Diagram (10). See also Tables (11), (12), and (13). As it is clear in Diagram (8, j, i, k and l) coffee imports started to decline from 1870-74, cotton from 1880-84, sugar from 1875-79 and indigo from 1885-89. Since the prices of these articles were also falling considerably throughout the period - except those of cotton from 1890- their values declined in absolute terms. The quantity of rice imported, as Diagram (8-e) shows, was growing between 1870-74 and 1880-84 and then started to fluctuate and by 1910-13 was again at the same level of 1870-74. Thus the decrease in the portion which rice imports occupied by value in general imports from E.E. was not matched by any significant decrease in volume and was mainly due to the faster growth of imports of other articles.

On the other hand, the quantity of meat imported from E.E. increased dramatically from the early 1880's and by 1910-13 was as much as 27 times the size of 1880-1884. Calculated by value this dramatic rise was partly concealed because of the trend which meat prices followed during the period. Butter imports, as Diagram (8-h) shows, had almost begun only in 1880-84 and

TABLE NO. 11

Values of the Principal Articles Imported into U.K. from British Dominions and Colonies East of Suez. (Annual Averages in Quinquennial Periods 1855-1913) *

in £ Millions

	Wheat	Rice	Tea	Coffee	Raw Sugar	Meat ø	Butter	Raw Cotton	Raw Wool	Raw Jute	Raw Silk	Indigo	Rubber	Tin
1855-59	.004	1.540	.063	1.290	3.220	-	-	4.960	4.820	.600	.480	1.800	.019	.264
1860-64	.002	1.740	.288	2.720	2.160	-	-	20.300	6.750	1.200	.320	1.860	.091	.348
1865-69	.014	1.950	.680	3.400	1.210	.036	-	26.220	10.100	1.760	.220	1.680	.184	.392
1870-74	.672	2.810	1.410	3.900	1.320	.556	.030	14.400	12.360	3.530	.550	1.740	.364	.854
1875-79	2.340	3.040	2.830	3.770	1.760	.459	-	6.300	17.580	2.930	.270	1.500	.220	.936
1880-84	5.680	2.980	3.390	2.220	1.500	.570	.011	7.250	19.450	4.140	.150	2.160	.490	1.980
1885-89	4.580	1.830	4.830	1.260	.820	1.320	.047	4.940	17.750	3.740	.270	1.730	.308	2.346
1890-94	4.310	1.930	7.770	.440	.770	3.402	.688	2.400	18.940	4.270	.270	1.200	.248	2.262
1895-99	2.490	1.520	8.830	.700	.500	5.335	1.445	.800	17.540	3.970	.190	1.190	.384	1.848
1900-04	5.460	1.940	8.540	.500	.280	6.634	2.376	1.350	14.720	4.240	.160	.470	.297	3.328
1905-09	8.909	1.813	9.168	.416	.321	7.011	4.163	1.950	20.221	6.401	.123	.114	.802	5.084
1910-13x	13.755	2.145	11.144	.260	.775	10.714	5.823	2.412	22.453	6.951	.019	.056	7.35	4.988

* Calculations are based on declared values of articles imported into the U.K. which were published annually in Parliamentary Accounts and Papers; See under..."Annual Statement of the Trade of the U.K."...

ø Meat, all kinds except poultry

x Four Years' Average

\- Nil or negligible Amounts.

TABLE No. 12

Quantities of the Principal Articles Imported into U.K. from British Dominions and Colonies East of Suez (Annual Averages in Quinquennial Periods 1855-1913)*

In Millions

	Wheat Cwts.	Rice Cwts.	Tea lbs.	Coffee Cwts.	Raw Sugar Cwts.	Meat ϕ Cwts.	Butter Cwts.	Raw Cotton Cwts.	Raw Wool lbs.	Raw Jute Cwts.	Raw Silk lbs.	Indigo Cwts.	Rubber Cwts.	Tin Cwts.
1855-59	.007	2.800	.900	.380	2.300	-	-	1.600	67.300	.700	.500	.060	.003	.040
1860-64	.003	2.900	3.600	.680	1.800	-	-	3.500	94,800	1.200	.320	.060	.011	.060
1865-69	.023	3.000	8.500	1.000	1.100	.012	-	4.600	153.300	2.000	.170	.050	.023	.080
1870-74	1.120	5.500	20.100	1.000	1.100	.206	.005	3.600	205.900	3.800	.500	.060	.034	.140
1875-79	4.260	6.200	43.600	.820	1.600	.153	-	2.100	293.100	3.900	.300	.060	.022	.260
1880-84	11.140	7.100	65.100	.580	1.500	.211	.002	2.500	367.400	5.600	.180	.080	.035	.440
1885-89	12.040	4.700	105.000	.340	1.200	.574	.009	1.900	432.700	6.290	.400	.080	.027	.460
1890-94	11.960	4.600	180.800	.200	1.200	1.620	.125	1.000	512.400	6.320	.400	.060	.021	.580
1895-99	7.320	3.700	232.300	.160	1.000	2.964	.284	.400	516.200	6.820	.300	.070	.032	.560
1900-04	16.060	5.400	266.800	.160	.600	3.317	.466	.500	432.800	6.200	.260	.030	.022	.640
1905-09	22.760	4.900	286.500	.160	.617	3.690	.771	.650	493.200	6.810	.186	.008	.048	.820
1910-13x	33.250	5.500	301.200	.100	1.270	5.639	.987	.670	534.600	6.620	.032	.004	.350	.860

* Calculations are based on importers declarations - which are given annually in "Parliamentary Accounts and Papers; see under ...."Annual Statement of the trade of the U.K."...

ϕ Meat, all kinds except poultry

x Average of Four Years 1910-13

\- Nil or negligible Amounts.

TABLE NO. 13

Prices of Principal Articles Imported into U.K. from British Dominions and Colonies East of Suez. Annual Averages in Quinquennial Periods 1855-1913*

In £ Per Unit Weight

	Wheat £/Cwt	Rice £/Cwt	Tea £/lb	Raw Sugar £/Cwt	Coffee £/Cwt	Meat† £/Cwt	Butter £/Cwt	Raw Cotton £/Cwt	Raw Wool £/lb	Raw Jute £/Cwt	Raw Silk £/lb	Indigo £/Cwt	Rubber £/Cwt	Tin £/Cwt
1855-59	.63	.55	.069	1.4	3.4	++	++	3.1	.072	.86	.95	30.0	6.2	6.6
1860-64	.57	.60	.076	1.2	4.0	++	++	5.8	.071	1.00	1.00	31.3	8.3	5.8
1965-69	.59	.65	.079	1.1	3.4	3.0	4.3	5.7	.066	.88	1.30	33.6	8.0	4.9
1870-74	.60	.51	.070	1.2	3.9	2.7	5.9	4.0	.060	.93	1.10	28.7	10.7	6.1
1875-79	.55	.49	.065	1.1	4.6	3.0	6.4	3.0	.060	.75	.90	25.2	10.0	3.6
1880-84	.51	.42	.052	1.0	3.8	2.7	5.3	2.9	.053	.74	.82	26.8	14.2	4.5
1885-89	.38	.39	.046	.68	3.7	2.3	5.2	2.6	.041	.60	.68	21.6	11.4	5.1
1890-94	.36	.42	.043	.64	4.7	2.1	5.5	2.4	.037	.68	.67	19.6	11.8	3.9
1895-99	.34	.41	.038	.50	4.4	1.8	5.1	2.0	.034	.58	.63	17.0	12.1	3.3
1900-04	.34	.36	.032	.47	3.1	2.0	5.1	2.7	.034	.68	.63	15.5	13.5	5.2
1905-09	.40	.37	.032	.52	2.6	1.9	5.4	3.0	.041	.94	.66	14.2	16.7	6.2
1910-13 x	.42	.39	.037	.61	2.6	1.9	5.9	3.6	.042	1.05	.60	13.9	21.0	5.8

* Calculations are based on annual prices, c.i.f., given in Parliamentary Accounts and Papers for the respective period. Official import prices were based on importers declarations for the quantities and the values of imported articles (+) Average prices, cif, for all kinds of meat except poultry. (x) Average of four years. (++) Meat was imported from Australasia since 1865 and butter since 1869.

averaged about a million cwts in 1910-13. As prices of butter were fairly constant until the beginning of the century and then started rising steadily until 1913, butter imports by value were inflated in such a way as to allow them to occupy a significant place among other articles imported from E.E. The volume of jute imports from India grew steadily between 1870-74 and 1895-99 and then the level of the latter quinquennium was maintained almost constant until 1910-13. Yet, the value of jute imports kept rising after 1895-99, as jute prices were advancing upwards. In relation to other articles imported from E.E., the rise in the value of jute had just succeeded to maintain its relative importance around 6% throughout. The considerable rise in the portions of raw wool between 1870-74 and 1895-99, of wheat between 1870 and 1913, was supported in each case by a huge increase in volume. The case of wheat was, however, unexampled as the quantity rose from 1.12 millions cwts in 1870-74 to 33.25 millions cwts by 1910-13. As diagram (8-b) shows, the change in the weight of rubber imports, by value, in general imports from E.E. - in particular since the beginning of the 20th century - was clearly a reflection of the rise in the prices, rather than a rise in the quantity imported of this raw material.

Another significant point might be taken from Tables No (11) and No. (12) which furnishes the data of diagrams (10) and (8). In 1870-74 the quantity of the most important articles imported from E.E. was 18.583 millions cwts and their value totalled £42.67 millions. Thus the average price of each cwt imported from E.E. at the beginning of the period under review was about £2.3. By 1910-13 the quantity of the most important articles was about 62.712 millions cwts and their value amounted to £89.210 millions. Accordingly the average price of each cwt was about £1.4 by t e end of the period. The decline in the average value of each "cwt" coming from E.E. between 1870-74 and 1910-13 by about 40% was partly a result of the decline in general import prices and partly because of the rapid growth in the imports of some bulky commodities - e.g. wheat - and whose trade with E.E. had only been commenced in the early 1870's. To conclude, the traditional character of the import trade coming from E.E. as based on the lighter and costlier commodities had changed considerably during that period.

General imports from E.E. increased from an average of £51 m in 1865-69 to £59.1 m in the quinquennial period 1875-79 and out of this rising value re-exports were developed at a faster rate than that of net imports. Re-exports increased from an average of £17.4 m in 1865-69 to an average of £24.5 m in 1875-79 (i.e., a growth equal

to 41%), and thus as a percentage in general imports from E.E. they rose from 33.8% to 41.7%. In 1880-84 general imports rose by £11.2 millions over the average of 1875-79. Out of this increase net imports grew at a rate which was slightly higher than that which re-exports had increased at, so that the re-export ratioin general imports was reduced slightly to 41%. In 1885-89 general imports decreased by £4.7 millions from the average of the previous period and the division between re-exports and net imports had almost been maintained at 41% and 59% respectively.(17)

The spectacular growth in British re-exports of E.E.'s produce which was achieved during the ten years following the opening of the Suez Canal, and which was almost maintained during the 1880's was clearly due to the rise in re-exports of Australian wool and Indian jute, tea and rice (see analysis of the import trade by commodity in the foregoing pages). With the exception of tea imports these commodities were still economically channelled by the Cape route. That situation was obviously favourable to the British shipowners who until that time possessed a large volume of sail tonnage. The examination of trade returns and other available evidence showed that

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(17) The highest year for re-exports, as a percentage in total imports from E.E., was 1885 when they represented 45%

British trade also gained when the Cape route was depended upon in the 1870's and the 1880's and subsequently British re-exports of E.E's produce were fostered and developed. Besides, since British home consumption of wool, jute and tea was of itself quite substantial it was economical for British merchants in these cases to carry further amounts for re-exports. Meantime, it was also still economical for most of the European countries whose imports of Australian wool or Indian tea and jute were small to resort to London market to satisfy their needs rather than conducting a direct trade (clearly at higher costs under these circumstances) with the East.

From the early 1890's there were clear signs that the scale began to be weighed favourably towards the growth of imports which aimed at the satisfaction of the British consumers. The significance of imports of wheat, meat and butter which mainly came for home consumption had considerably increased by then. Meanwhile, re-exports of cotton, silk, spices and indigo which started to decline, comparatively, since 1869 had reached much lower levels. Also re-exports of coffee began to decrease since the late 1870's and those of rice since the late 1880's. British re-exports of Eastern produce to Europe were further hindered during that period by the policy of the Conference which raised the cost of shipping between

Britain and the East at a time when other European nations still gained from the fall in freight rates which began after 1869. However, the total value of re-exports of E.E's produce did not decline in absolute terms except for the second half of 1890's when re-exports of Australian wool declined both by volume and by value, it declined from £27.0 millions, the average of 1885-89 and also of 1890-94, to £23.1 millions. As a per cent of general imports from E.E., it diminished to 34.9%. With the turn of the century re-exports of E.E's produce started to grow again to reach an average of £50.7 millions in 1910-13. As a percentage of general imports this trade did not, however, achieve any increase over the relatively low level which it had reached in the late 1890's. On the contrary, it declined further to be a little over 32% in 1900-1904 and then stagnated at such level until 1910-13. It should be noted that the development of re-exports of wool, jute, tin and rubber had been very significant for the trend in this particular trade during the period 1900-1913.

These developments can be further illustrated by diagrams No. (11) and No. (12) where the period from 1855 to 1869 is included with the period under review for purpose of comparison. See also diagram No. (13) for the growth of net imports from E.E. by volume.

DIAGRAM (11).

BRITISH IMPORTS FROM EASTERN EMPIRE.

*Total Imports ——————

*Re-exports ....

Millions of £ Sterling.

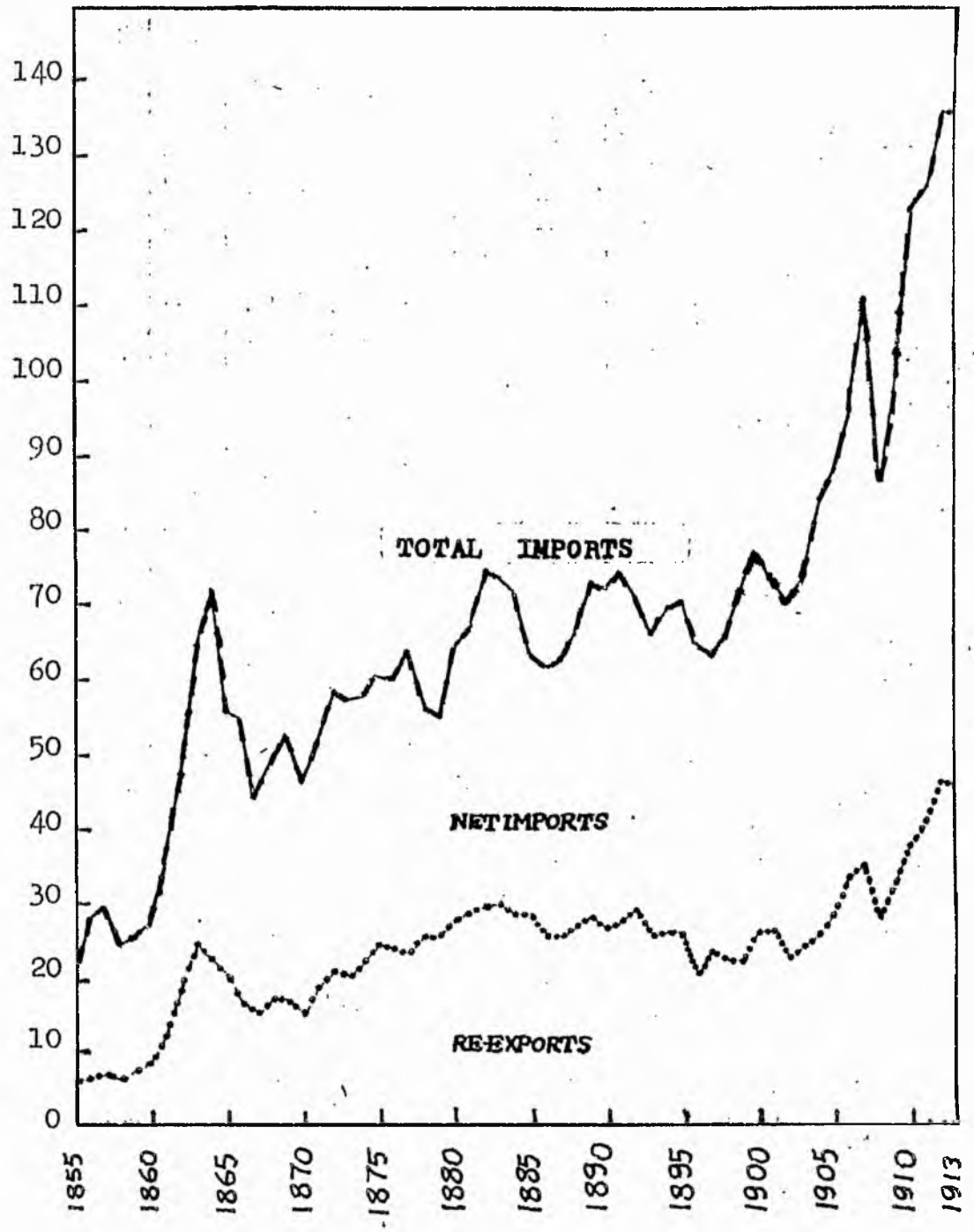


DIAGRAM (12).

*Percentage re-exported out of British imports from Eastern Empire "———"

*Percentage of re-exports of foreign produce and manufactures in total British exports to Eastern Empire. "••••••••"

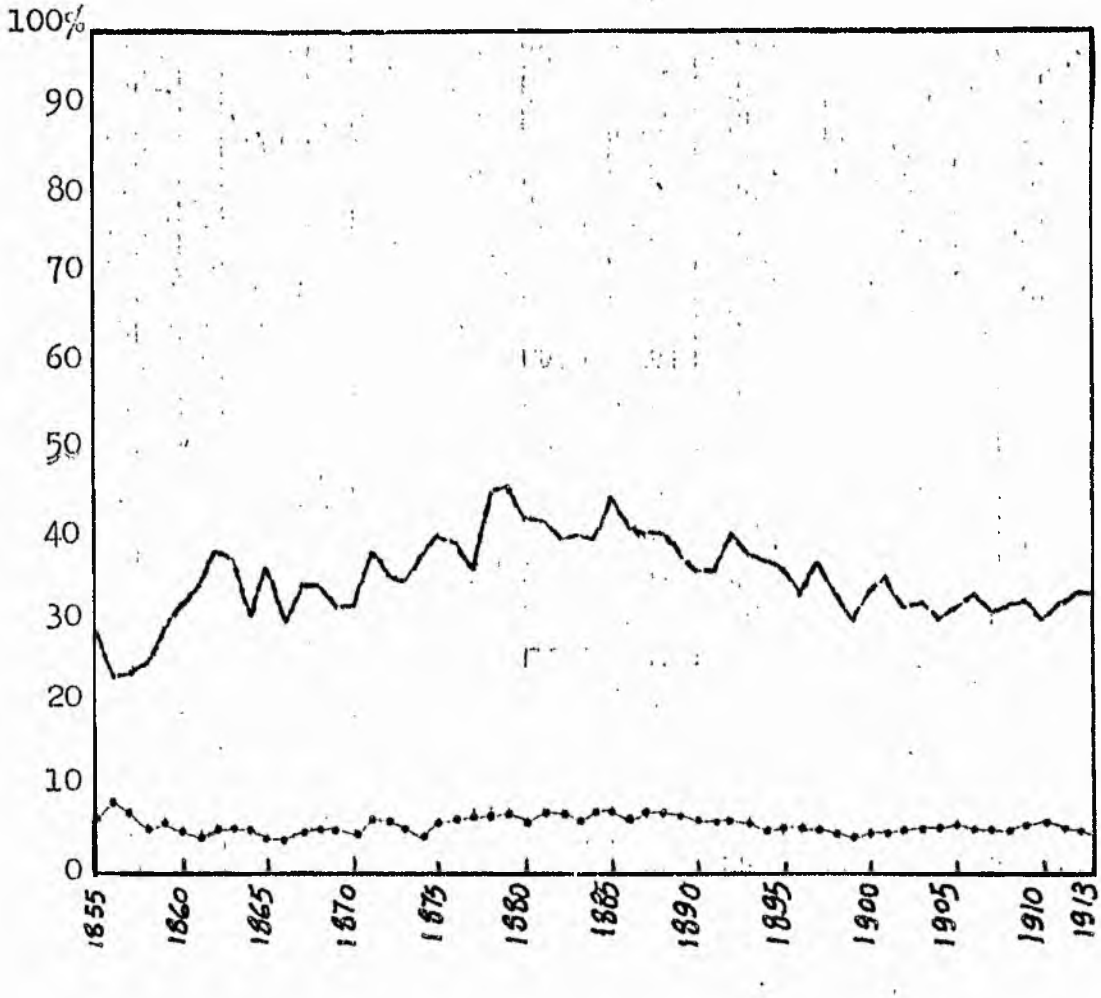
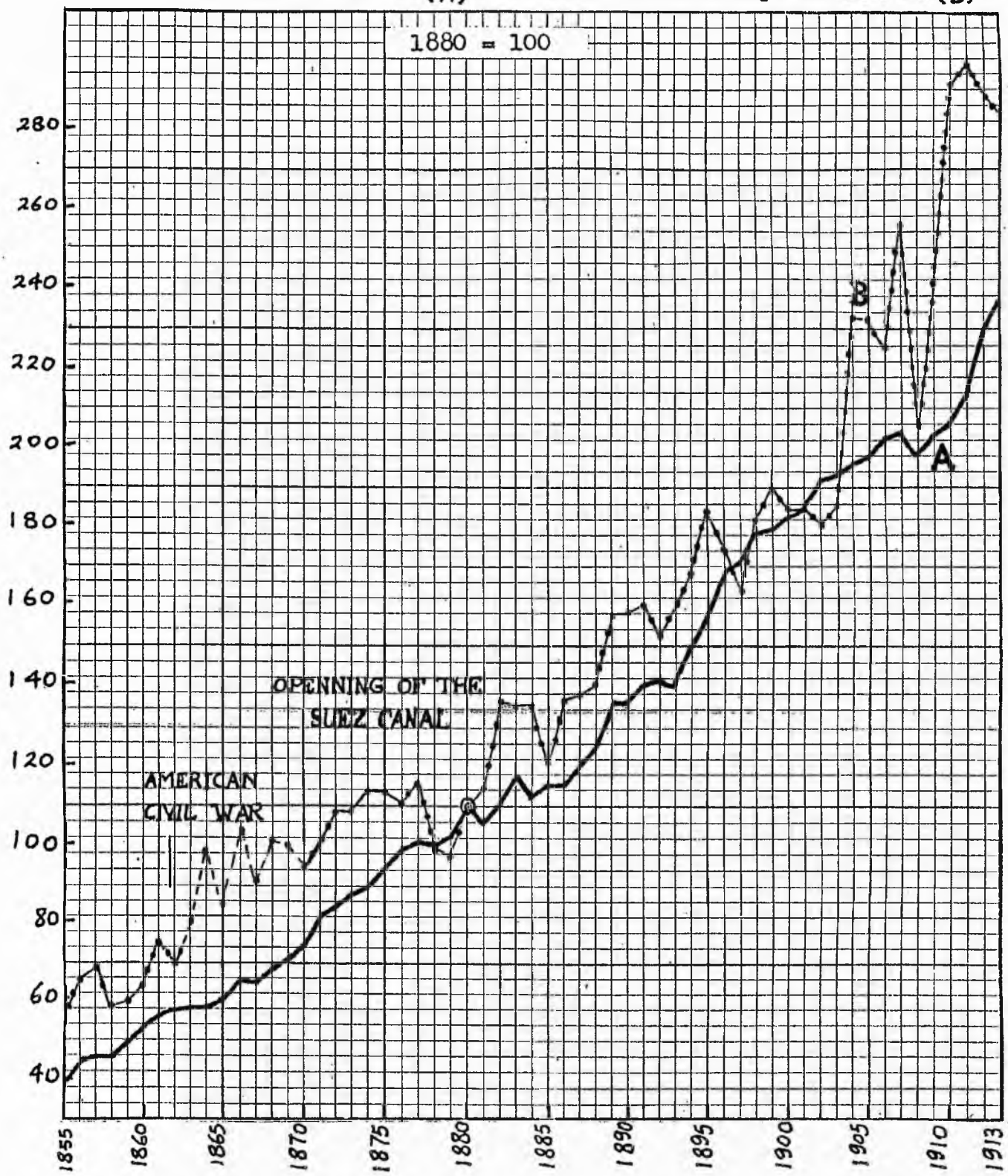


DIAGRAM (13).

INDEX NUMBER OF VOLUME OF BRITISH NET IMPORTS DURING THE PERIOD 1855-1913. 1880=100.

*From all sources+ —— (A) *From Eastern Empire++ ------ (B)



+ Source; A.H.Imlah, Economic Elements In The Pax Britannica, 1958.

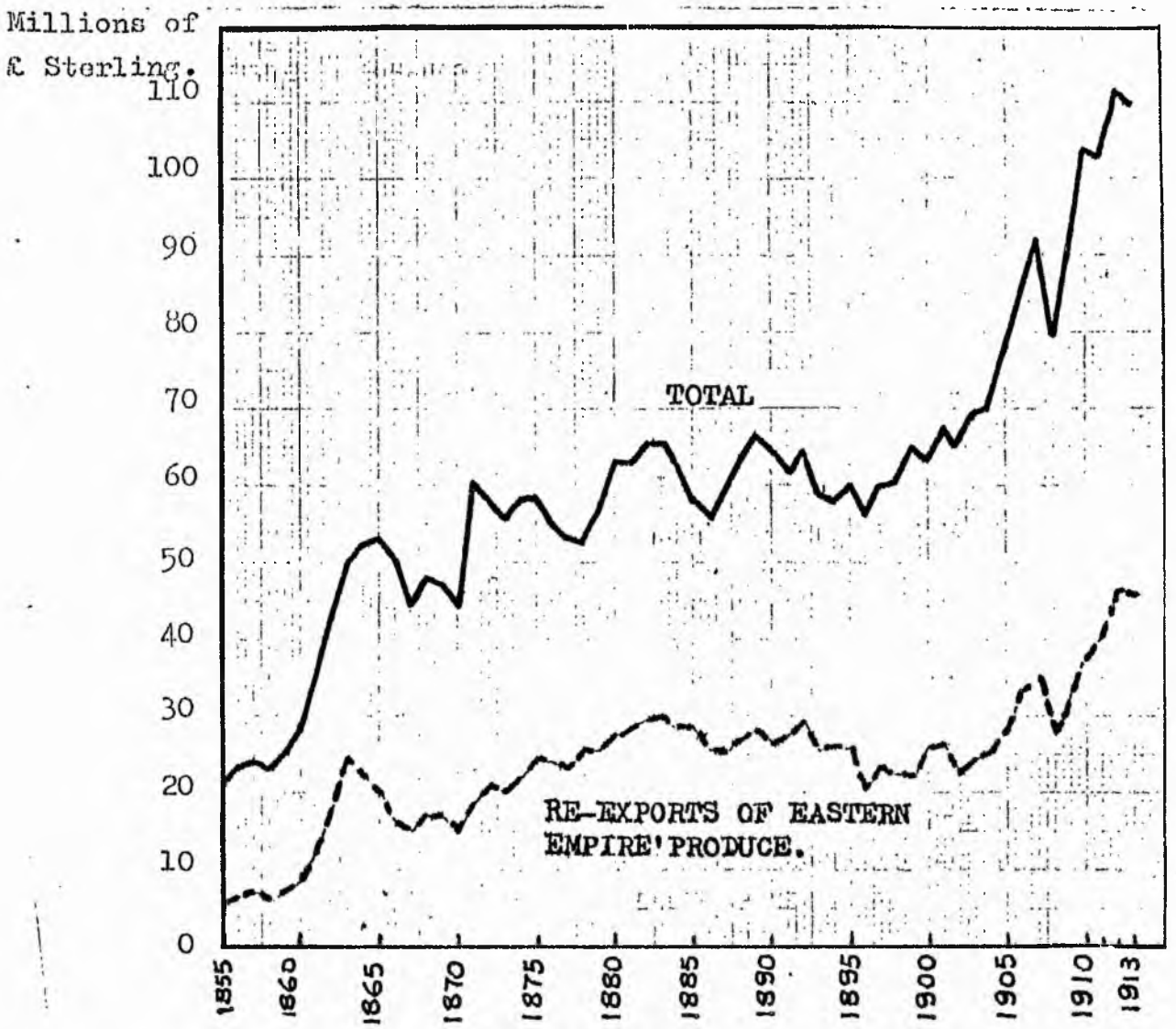
++Constructed on the basis of data obtained from Parliamentary Accounts And Papers for the period 1855-1913.

When the growth of re-exports of E.E's produce is compared with the growth of total re-export trade of Britain over the twenty five years following 1869 we find that; firstly, between 1871 and 1885 re-exports of E.E's produce grew more steadily and at a rate which was considerably higher than that by which total re-export trade had increased. Thus as a percentage of total re-export trade, re-exports of E.E's produce grew from 33.7% in 1870 to 49.0% in 1885. Secondly, in the five years from 1886 to 1890 re-exports of E.E's produce were developed at a smaller rate when compared with the general trend of total re-export trade and then up to 1895 they were changing at almost the same rate. It can be noticed, however, that the growth of re-exports of E.E's produce had slackened down in the period between 1886 and 1895, that in fact was a sign of the change which was manifest only in the early years of the twentieth century. In the years between 1895 and 1908 re-exports of E.E's produce were declining as a percentage in total British re-export trade and reached 35.4% in the latter year.

Yet, this trade was again rising and by 1913 it represented 41.5% of total British re-exports, which was higher than the corresponding percentage of 1870 by 7.8%. See Diagram (14) and Table (14). Adding to this the fact

DIAGRAM (14).

a-BRITISH RE-EXPORT TRADE 1855-1913.



b- RE-EXPORTS OF EASTERN EMPIRE'S PRODUCE AS A PERCENTAGE IN TOTAL BRITISH RE-EXPORTS.

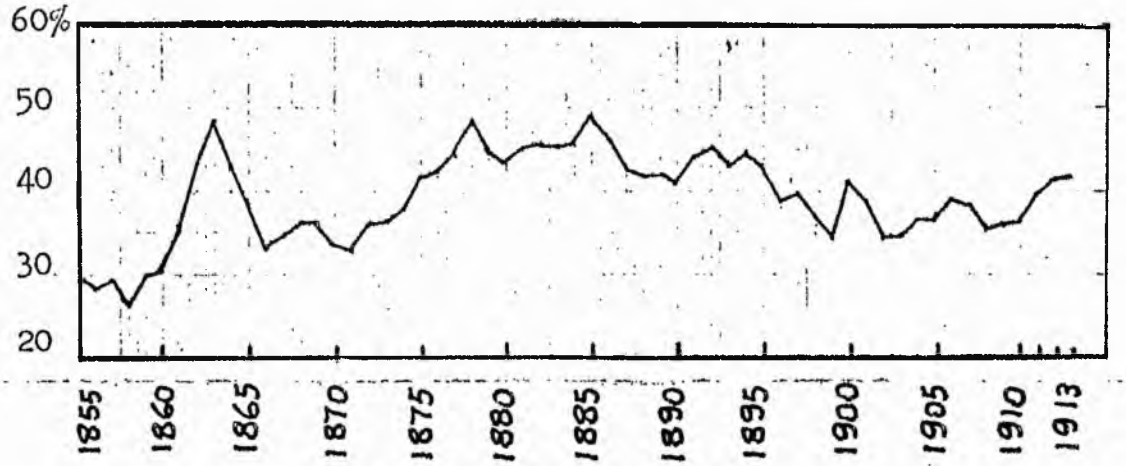


TABLE NO. 14

U.K's Imports from E.E. 1855-1913

Year	General Imports £ mil.	Estimated Re-exports Per Cent	Estimated Re-exports £ Mil.	Estimated Net Imports Per Cent	Estimated Net Imports £ Mil.	+ a %	+ b %
1855	21.0	29.4	6.2	70.6	14.8	29.5	12.1
1856	27.5	23.9	6.6	76.1	20.9	28.2	14.0
1857	29.3	24.0	7.0	76.0	22.3	29.1	13.6
1858	24.4	25.3	6.2	74.7	18.2	26.7	12.9
1859	25.5	29.7	7.6	70.3	17.9	30.0	11.6
1860	26.8	32.3	8.7	67.7	18.1	30.4	10.0
1861	35.1	34.8	12.2	65.2	22.9	35.4	12.5
1862	47.3	38.8	18.4	61.2	28.9	43.6	15.8
1863	64.4	37.8	24.3	62.2	40.1	48.3	20.2
1864	72.1	31.0	22.4	69.0	49.7	42.9	22.3
1865	55.7	36.8	20.5	63.2	35.2	38.7	16.1
1866	54.8	30.5	16.7	69.5	38.1	33.4	15.5
1867	44.1	34.7	15.3	65.3	28.8	34.4	12.5
1868	49.8	34.7	17.3	65.3	32.5	36.0	13.2
1869	52.6	32.3	17.0	67.7	35.6	36.1	14.3
1870	46.5	32.3	15.0	67.7	31.5	33.7	12.2
1871	51.7	38.5	19.9	61.5	31.8	32.9	11.8
1872	58.4	35.9	21.0	64.1	37.4	36.0	12.6
1873	57.1	35.4	20.2	64.6	36.9	36.2	11.7
1874	57.8	38.1	22.0	61.9	35.8	37.9	11.5
1875	60.3	40.3	24.3	59.7	36.0	41.8	11.4
1876	60.0	39.8	23.9	60.2	36.1	42.6	11.3
1877	63.9	36.9	23.6	63.1	40.3	44.2	11.8
1878	56.1	45.2	25.4	54.8	30.7	48.3	9.7
1879	55.0	46.3	25.5	53.7	29.5	44.5	9.7
1880	64.8	42.4	27.5	57.6	37.3	43.4	10.7
1881	67.4	42.1	28.4	57.9	39.0	45.0	11.7
1882	74.3	40.0	29.7	60.0	44.6	45.6	12.8
1883	73.5	40.6	29.8	59.4	43.7	45.4	12.1
1884	71.5	40.1	28.7	59.9	42.8	45.6	13.1
1885	63.5	45.0	28.6	55.0	34.9	49.0	11.2
1886	61.8	41.9	25.9	58.1	35.9	46.1	12.2
1887	62.9	40.6	25.5	59.4	37.4	42.9	12.4
1888	66.5	40.5	26.9	59.5	39.6	42.0	12.8
1889	73.1	38.4	28.1	61.6	45.0	42.1	12.5
1890	72.4	36.7	26.6	63.3	45.8	41.1	12.9
1891	74.7	36.5	27.3	63.5	47.4	44.1	12.7
1892	71.3	40.8	29.1	59.2	42.2	45.1	11.8
1893	66.5	38.2	25.4	61.8	41.1	43.1	11.9
1894	69.5	37.4	26.0	62.6	43.5	44.8	12.4
1895	70.4	36.6	25.8	63.4	44.6	43.1	12.5
1896	65.0	33.5	21.8	66.5	43.2	38.8	11.2
1897	63.6	37.1	23.6	62.9	40.0	39.4	10.2
1898	66.3	33.7	22.3	66.3	44.0	36.8	10.7
1899	73.4	30.2	22.2	69.8	51.2	34.2	12.2
1900	77.0	33.8	26.0	66.2	51.0	41.1	11.1
1901	74.0	35.5	26.3	64.5	47.7	36.8	10.5
1902	70.9	32.0	22.7	68.0	48.2	34.5	10.4
1903	74.3	32.6	24.2	67.4	50.1	34.8	10.6
1904	84.3	30.6	25.8	69.4	58.8	36.7	12.2
1905	88.8	32.0	28.4	68.0	60.4	36.5	12.4
1906	96.9	34.3	33.2	65.7	63.7	39.0	12.2
1907	111.4	31.7	35.3	68.3	76.1	38.4	13.7
1908	87.7	32.2	28.2	67.8	59.5	35.4	11.6
1909	101.1	32.4	32.8	67.6	68.3	39.9	12.8
1910	123.6	30.7	38.0	69.3	85.6	36.6	14.9
1911	126.6	32.4	41.0	67.6	85.6	39.9	14.8
1912	136.7	33.8	46.2	66.2	90.5	41.4	14.3
1913	136.2	33.4	45.5	66.6	90.7	41.5	13.8

* See Appendix C for the method adopted in estimating re-exports and imports for home consumption which came from E.E.

+ "a" stands for $\frac{\text{Re-Exports of Produce of E.E. from U.K.}}{\text{Total Re-export Trade of U.K.}}$

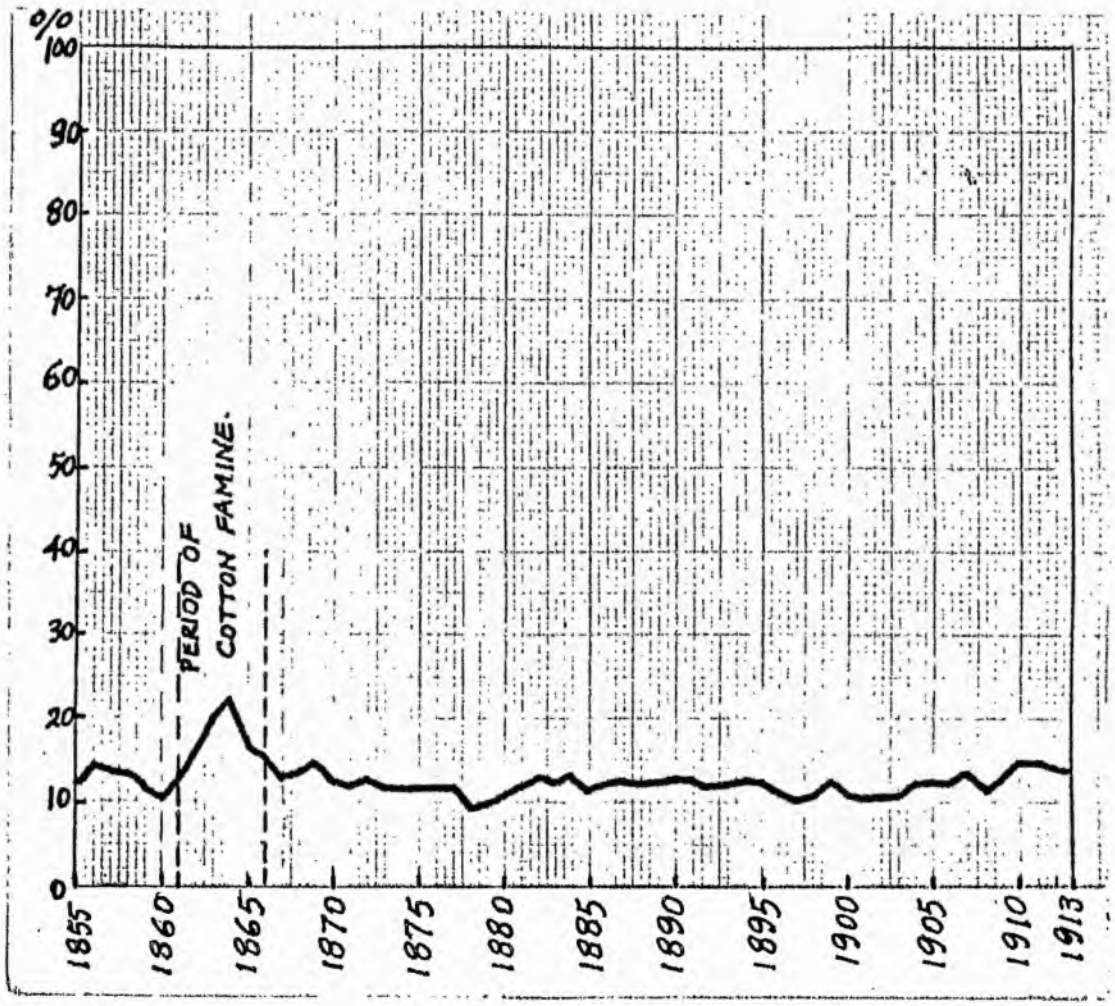
"b" stands for $\frac{\text{Net Imports into U.K. from E.E.}}{\text{Net Imports into U.K. from Various Foreign and Colonial sources.}}$

that general imports, i.e., net imports plus re-exports, from E.E. was only equal to 17.7% of general imports of Britain in 1913, we might conclude the following; in spite of the considerable change in the structure of British imports from E.E., during the period 1869-1913, in favour of the trades that satisfied the British consumer, the growth of Britain's re-export trade was significantly dependent throughout on E.E. more than on any other foreign or colonial source. And, although this dependence had relatively declined during the period 1895-1913, when compared with the period 1870-1895, it was still by the end of the period at a higher level than it had been at the beginning of it.

The growth of net imports from E.E. in relation to the growth of imports retained for home consumption in Britain is shown in Diagram (15). It can be seen that the proportion which E.E. had provided for British consumption varied slightly around 11% and 12.5% during all the period except in the last six years when it rose to 14% in average. Knowing that Britain had remarkably increased her net imports, from all foreign and colonial sources, from £258.8 millions in 1870 to £659.2 millions in 1913, we might conclude that; in spite of the considerable speed by which Britain pushed up her net imports during the period 1870-1913, the importance of E.E. as a source of raw materials and foodstuffs to British people had kept pace with other sources or even increased.

DIAGRAM (15).

$$\% = \frac{\text{NET IMPORTS FROM EASTERN EMPIRE.}}{\text{NET IMPORTS FROM ALL SOURCES.}}$$



In the analysis given in earlier pages of this Chapter it has been shown that the rapid development of British imports for home consumption was only made possible by the cheapening and quickening of Eastern transport consequent upon the opening of the Canal and the employment of steamships on that route.(18) Imports of grain and fresh foodstuffs began only under these circumstances. Imports of raw materials were also speeded up by the same factors and were increasingly taking the place of similar imports which came from other sources in the world. The great expansion in British investment in new plantations, mining industry and railways in the principal parts of E.E. had also been of considerable importance to the growth of the inter-imperial trade. Yet there is strong evidence that this investment was partly stimulated by the revolution of transport since that had succeeded in laying down new foundations for Eastern trade expansion. Before 1870 British capital was outpouring to Europe and North America where the rate of return on productive investment was comparatively high. During that time only small amounts of British capital were invested in the Empire. However, in the last quarter of the 19th century and in the early years of the 20th century this situation was changing as more capital than ever came

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(18) The introduction of telegraphic communications between Britain and her principal dominions and colonies in the East since 1870 strengthened the link between these geographically separated markets and was certainly significant for the development of the inter-imperial trade.

to be invested in Australasia, India, Ceylon, the Straits Settlements, Malaya and British East Africa, territories which were all situated East of Suez and whose external trades with Europe and America were showing great expansion. (19)

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(19)

For the amounts of British capital invested in Australasia, India and other principal British Colonies in the East, see R.L. Nash, "A Short Inquiry into the Nature of Our Profitable Investment, London 1881; G. Paish, "Great Britain's Capital Investment in Individual Colonial and Foreign Countries", Journal of Royal Statistical Society, September 1909 and January 1911. For the increase in British investmert in Australasia and India after 1870 and reasons for it see A.K. Cairncross "Home and Foreign Investment" 1870-1913 (Published in 1953).

The Development of British Imports from Various Parts of E.E. The Change in British Share in E.E's Export Trade.

The development of British imports (for re-exports and for home consumption) from various parts of E.E. during the period 1855-1913 is shown in diagram (16). It can be seen that total imports from India had averaged about £30 millions during the 1870's, fluctuated between £30 millions and £40 millions during the 1880's and then between £25 millions and £30 millions during the 1890's. However, with the exception of a setback in 1908, total imports from India grew steadily from £27.4 millions in 1900 to £48.4 millions in 1913. These changed can partly be explained by the movements of average import prices of the principal articles which came from India. These were falling at a considerable rate from the early 1870's until the late 1890's when they started to rise again. See Diagram (8, a, c, f, and i) for prices of wheat, jute, tea and cotton, which represented the most important articles imported from India during 1870-1913. Besides, the decline in the value of Indian articles imported into Britain during the late 1880's and the 1890's was magnified by the fall of exchange between the Indian rupee with its silver base, and the Sterling on the gold standard.

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(20) Up to the early 1870's ten Indian rupee would exchange for one pound Sterling, but from that date onwards the rupee sank in value, till in 1893 it was a fraction of a penny over one shilling. In 1894 India adopted the gold standard and since that time to the end of the period, 1913, the rupee was fairly stable.

DIAGRAM (16).

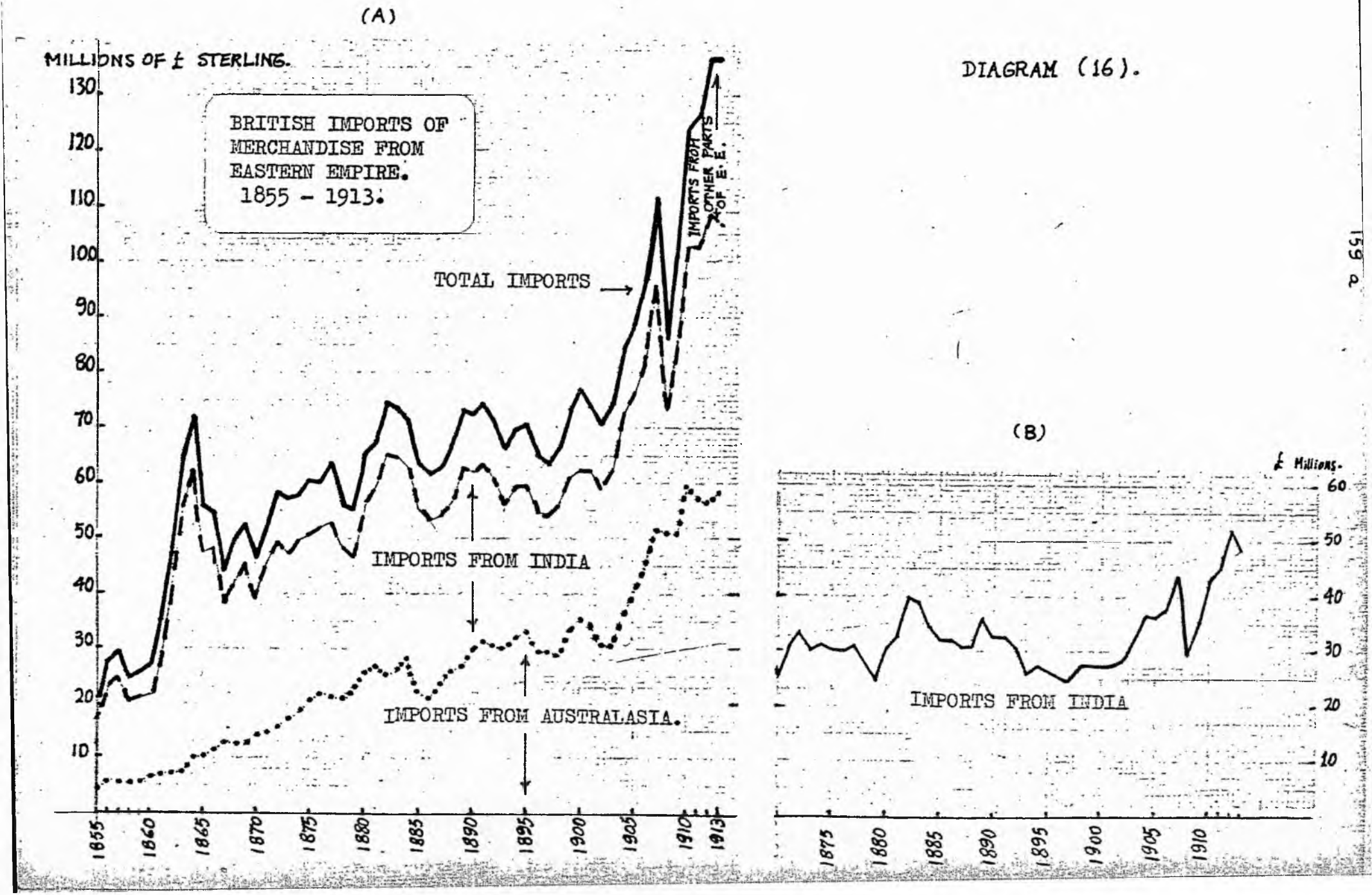
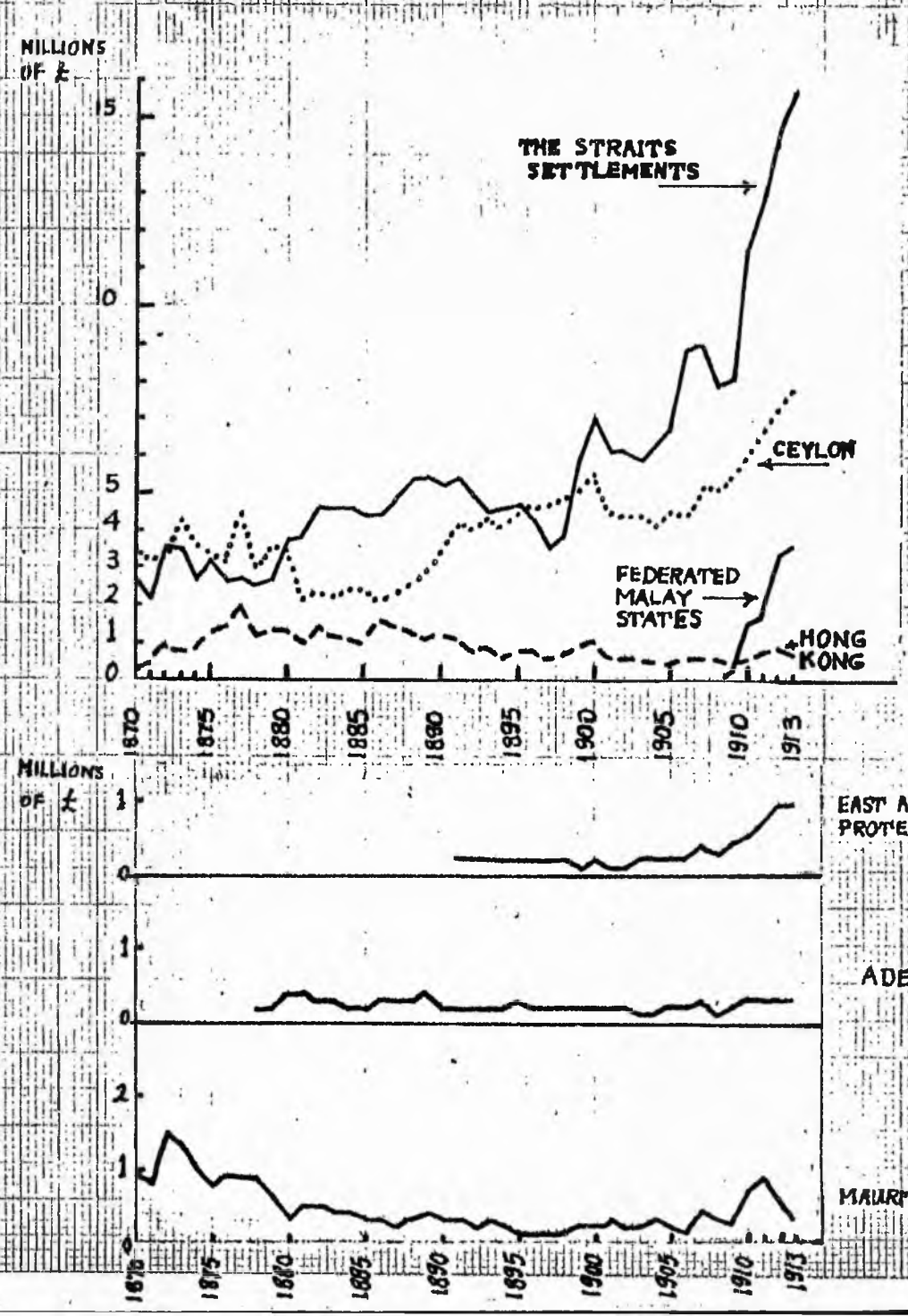

(A)
MILLIONS OF £ STERLING.
BRITISH IMPORTS OF MERCHANDISE FROM EASTERN EMPIRE. 1855 - 1913.
TOTAL IMPORTS
IMPORTS FROM OTHER PARTS OF E. E.
IMPORTS FROM INDIA
IMPORTS FROM AUSTRALASIA.
130
120
110
100
90
80
70
60
50
40
30
20
10
1855
1860
1865
1870
1875
1880
1885
1890
1895
1900
1905
1910
1913
(B)
£ Millions.
60
50
40
30
20
10
IMPORTS FROM INDIA
1875
1880
1885
1890
1895
1900
1905
1910

DIAGRAM (16)

BRITISH IMPORTS FROM E.E.



-16-
(C)

-16-
(D)

More important, however, in explaining the development of imports from India was the growth of direct trade between India and countries West of Suez particularly European countries, after the opening of the Canal. Direct exports from India to Europe, except Britain, and also to non-European ports in the Mediterranean Sea increased from 6.9%(21) of total Indian exports in 1870 to 30% of this total in 1913. The result of that change was reflected in the relative decline of the proportion which Britain took from total Indian exports, from 54.4% in 1870 to 25.8% in 1913, as well as in the decrease of her re-exports of Indian produce to Europe.(22) U.S.A., which also depended to some extent on the Suez Canal to to get her requirements directly from India instead of relying on Britain, managed to increase her share in the

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(21) See also Table No. 15 and the note given with it.

(22) No statistics were given about the re-export of Indian produce to Europe, yet many examples had been presented in the Parliamentary Accounts and Papers concerning the Indian trade to show that the decline in exports from India to Britain had accompanied an increase in exports from India to the continent of Europe. See for example, P.P. 1884. Vol. LIX, or P.P.. 1892. Vol. LVIII.

TABLE NO. 15 (a, b, c, d, e, and f)

The Share of Britain in the Foreign Trade of the Principal Parts of E.E.++ in some Selected Years during the Period 1870-1913.

(a) India.

	% Imported from:									% Exported to:								
	1870	1875	1880	1885	1890	1895	1900	1905	1910	1870	1875	1880	1885	1890	1895	1900	1905	1910
U.K.	64.9	79.0	72.8	70.9	72.2	70.3	63.9	59.2	59.8	54.4	47.9	40.1	37.3	35.9	33.6	27.6	30.5	23.5
Europe	1.5	1.9	3.8	3.2	4.6	7.1	11.2	11.6	11.4	6.9	12.9	14.6	20.8	22.8	23.9	19.2	26.1	27.3
U.S.A.	.2	.4	1.0	1.6	2.1	1.3	1.5	1.0	2.2	4.3	3.6	4.8	3.8	3.4	4.8	6.2	5.4	6.5
Others +	33.4	18.7	22.4	24.3	21.1	21.3	23.4	28.2	26.6	34.4	33.6	40.5	38.1	37.9	37.7	47.0	38.0	42.7

++ (1) The figures in this table included the trade of merchandize as well as that of bullion. However, as the only available figures, they might be used in the analysis of Chapter 4, to give us a rough indication for the changes in the relative importance of the merchandise trade of the mother country, on the one hand, and that of other Western countries, on the other, in the trade of various parts of E.E.

\+ (2) Data are not available for HongKong.

TABLE (15) -, b, c, d, e and f

% Imported from:

(b) Australia

	1870	1875	1880	1885	1890	1895	1900	1905	1910
United Kingdom	64.0	72.9	72.1	74.4	69.2	71.7	61.3	60.2	61.2
Europe *	1.6	.9	1.2	5.1	8.3	7.1	11.3	11.5	11.5
U.S.A.	3.1	2.4	4.0	5.6	6.5	6.0	12.2	11.7	10.8
Others +	31.3	23.8	22.7	14.9	16.0	15.2	15.2	16.6	16.5

(c) New Zealand

United Kingdom	57.9	63.6	56.5	69.9	67.4	62.4	61.1	60.8	61.6
Europe *	-	-	x	x	x	1.4	3.0	3.8	4.6
U.S.A	1.3	2.7	3.9	5.4	5.7	6.2	10.0	11.2	8.2
Others +	40.8	33.7	39.6	24.7	26.9	30.0	25.9	24.2	25.6

(d) Straits Settlements

United Kingdom	25.6	19.2	26.0	19.4	16.0	10.9	10.5	10.2	10.8
Europe *	3.4	3.4	2.3	2.4	2.9	2.7	5.3	5.0	4.3
U.S.A.	x	x	x	1.5	1.1	x	x	1.0	1.1
Others +	71.0	77.4	71.7	76.7	80.0	86.4	84.2	83.8	85.8

(e) Ceylon

United Kingdom	33.1	26.4	29.9	24.9	29.3	24.0	27.6	21.9	25.8
Europe *	x	x	1.1	x	x	x	7.6	6.5	5.9
U.S.A.									
Others +									

(f) Mauritius

United Kingdom	26.3	26.5	17.4	19.7	27.2	14.6	26.3	26.8	30.3
Europe *	13.8	16.9	14.5	16.4	15.6	11.6	11.2	11.8	12.5
U.S.A.									
Others +									

* Europe, excluding U.K., and including sometimes non-European ports in the Mediterranean Sea.

+ Others, mainly East of Suez

x Negligible amounts.

TABLE (15) a, b, c, d, e, and f

% Exported to:

Australia

	1870	1875	1880	1885	1890	1895	1900	1905	1910
United Kingdom	60.3	70.4	80.9	78.3	71.0	70.6	54.9	47.0	50.6
Europe *	x	.2	x	4.9	10.7	14.8	10.4	23.9	30.4
U.S.A.	.2	1.0	.9	4.3	5.1	2.9	10.4	1.9	2.2
Others +	39.4	28.3	18.1	12.4	13.1	11.6	24.2	27.1	16.7

New Zealand

United Kingdom	51.6	72.5	75.0	72.0	75.4	82.4	77.4	77.2	84.0
Europe *	-	-	-	-	x	x	x	x	1.3
U.S.A.	x	1.6	1.7	5.9	5.9	3.7	3.5	4.6	2.5
Others+	48.4	25.9	23.3	22.1	18.7	13.9	19.1	18.2	12.2

Straits Settlements

United Kingdom	20.0	19.1	16.7	21.7	19.4	17.4	26.2	20.2	26.9
Europe*	x	4.1	4.7	8.3	7.8	9.9	9.7	11.7	13.5
U.S.A.	8.9	5.9	8.6	3.7	6.6	8.0	10.3	12.8	9.1
Others+	71.1	70.9	70.0	66.3	66.2	64.7	53.8	55.3	48.5

Ceylon

United Kingdom	76.4	69.0	68.5	58.3	64.9	74.2	59.3	52.7	46.5
Europe*	2.1	10.6	9.5	9.0	2.7	1.5	14.0	17.9	22.5
U.S.A.									
Others+									

Mauritius

United Kingdom	26.3	29.1	12.1	14.1	11.3	4.1	9.1	7.3	22.3
Europe*	6.3	1.2	5.3	1.5	2.5	2.6	1.6	x	x
U.S.A.									
Others +									

total exports of India from 4.3% in 1870 to 6.4% in 1913.[23] Nevertheless, it would be noticed from Table (15) that the share of Western countries, including Britain, had decreased by 10.0% between 1875 and 1913. That was due to the rise in Indian exports to Australia, rise in tea exports thereto, and to the rise in exports of Indian cottons to parts of E.E., mainly Ceylon and Mauritius, and to other places East of Suez.

British imports from Australia and New Zealand increased steadily from £14.1 millions in 1870 to £33.4 millions in 1895 in spite of the continuous fall in prices of wool, wheat, tin and meat, the main articles imported therefrom. Between 1895 and 1902 imports from the Australasian dominions were declining owing to the drought which visited them in these years and reduced their total exports considerably. From 1902 to 1913 imports therefrom increased at a very high rate but that was partly due to the rise in prices of wool, wheat, tin and butter, see diagram (8,d, a, m and h). Considering the period 1870-1913 on the whole, we would find that imports from Australasia had been developed at a much faster rate than that by which imports from India were

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(23) Before 1919 the number of U.S. ships traversing the Suez Canal was not by any means significant. Yet, one could find many examples showing that direct trade between India and U.S. was carried by British and European ships using the Canal, from 1870's onwards. P.P. 1888. Vol.LXXVL.

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increased. Hence, the relative importance of Indian trade to total British imports from E.E. was considerably reduced during the selected period.

In the years between 1869 and the early 1880's - when direct steam communications were not yet established between Europe and Australia, Britain increased her share in Australian exports from 60.0% to about 80.0%. That was mainly reflected in the very rapid growth of wool imports, and also, but to a lesser extent, in the rise of imports of tin, copper, tallow and leather. However, with the growth in direct shipments from Australian ports to Europe, via the Suez Canal, from the 1880's onwards, the relative importance of Britain in Australia's export trade declined. By 1910 Britain obtained only 50.6% of Australian exports, while the share of European countries had increased, almost from nil in 1880 to 30.4% in 1910.

In New Zealand, however, the situation of Britain was different. The share of the mother country increased in New Zealand's export trade from 51.6% in 1870 to 84.0% in 1910. Meanwhile the share of Europe in this trade was almost negligible throughout the selected period. The share of U.S.A. in New Zealand's exports grew from 1.6% in 1875 to 5.9% in 1895 and then it began to decline.

The rise in Britain's imports from the Straits Settlements, from £2.6 millions in 1870 to £15.8 millions in 1913, was indeed most notable. However, between 1870 and 1879 imports from the Straits did not on the whole achieve any increase and throughout the period fluctuated around an average of £2.8 millions. During those ten years the share of Britain in the exports of the colony fell by about 3.3%, i.e., from 20.0% in 1870 to 16.7% in 1879, while the share of Europe in this particular trade rose from less than 1% in 1870 to 4.7% in 1879. The rapid growth of Britain's imports from the Straits was interrupted during the six years ending with 1897. Again that was met by a fall in the relative importance of the mother country in the Straits' export trade. Nevertheless, by the end of the selected period, and in spite of the continuous rise in the share of Europe in the Straits' exports till it reached 13.5% in 1910, the share of Britain in this particular trade had exceeded the level of 1870 by about 7.0%. The Straits Settlements' exports to U.S.A. increased from £.775 million in 1870 to £3.447 million in 1910. Yet the relative importance of U.S.A. in the Straits' export trade declined from 8.9% in 1870 to 3.7% in 1885, and although it rose later and reached 12.8% in 1905, it fell again to 9.1% in 1910. It might be noticed therefore that

the faster growth in the Straits' exports to Europe after the opening of the Suez Canal had affected the relative importance of the trade with U.S.A. more than it did to that of Britain.

The rise in the imports from the Straits Settlements, particularly during the period 1897-1913, had mainly come through the rapid growth of rubber and tin imports. Similarly, the rapid development of British imports from the Federated Malay States after 1909 was principally due to the remarkable increase in imports of these two particular commodities.

Britain's imports from Hong Kong increased during the seven years following 1870 and then they steadily declined throughout the rest of the selected period. Thus, they increased from £.3 million in 1870 to £1.9 million in 1877 and then they fell to £.7 million in 1913. The fall in imports from this colony was obviously due to the decline in the imports of silk and tea. Imports of raw silk from Hong Kong fell from 159,711 lbs in 1877 to nil in the last ten years of the selected period. Imports of tea therefrom declined from 12,974,838 lbs in 1879 to only 109,323 lbs in 1913.(24)

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(24) It was France which took over Britain's situation in the silk trade of India and Hong Kong after the opening of the Canal. Tea from Hong Kong was affected by the development of imports from India.

During the 1870's and the early 1880's the import trade with Ceylon was very much influenced by the decline in imports of coffee, raw cotton and spices and by the unstable development of coconut oil imports. On the whole, Britain's imports from Ceylon declined from £3.5 millions in 1870 to £2.1 millions in 1886. The growth of tea imports, from 1882, and of cocoa imports, from 1887, had undoubtedly contributed considerably to the growth of British imports from Ceylon after 1886, till they amounted to £7.8 millions in 1913.

The share of Britain in Ceylon's exports fell from 76.4% in 1870 to 58,3% in 1885. During the late 1880's and the early 1890's Britain managed to regain a good deal of her relative importance in Ceylon's export trade, so that by 1895 her share had climbed to 74.2%. Meanwhile the share of Europe in Ceylon's exports which had reached 9.0% in 1885, had declined to only 1.5% in 1895. Nevertheless, between 1895 and the end of the selected period this situation was once again reversed, as the share of the mother country in this particular trade had declined by about 28.0% while that of Europe had risen by 21.0%

For further explanation of the development of Britain's imports from various parts of E.E., and also for the changes in her relative importance in their export trade in the period 1870-1913, see Diagram (16) and Table (15). It would be noticed from Table (15) that the share of Britain as well as that of Europe in Mauritius' exports had, broadly speaking, declined throughout the selected period. That was mainly due to the decline in Mauritius' principal export to the West; namely sugar.

B - The Development of British Exports to E.E. (1869-1913)

Before discussing the effect of the changes in freight rates and the rise in European competition in the Eastern market after 1869 upon the growth of British exports to E.E., we shall recognise two other factors which influenced the growth of this trade throughout the period under review.

First: The trade policy of Britain and E.E. and its Influence;(25)

In reviewing the development of British exports to E.E. in the years between the adoption of free trade in the early 1840's and the opening of the Suez Canal in 1869, we have come to realize that the change which follow-ed the adoption of the new trade policy in the Crown Colonies was not by any means fundamental.(26) Nor was the sort of protectionism which the Australasian self-governing colonies adopted at that time of any real significance when its consequences were compared with the influence of other economic forces which operated during the same period.

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(25) See Appendix "D" at the end of this Chapter.

(26) See Chapter 2.

Now for the period 1869-1913, with the revolution which took place in transport and communications, the influence of the trade policy was bound to be more effective. In British colonies in the East, some industries were growing and were given no protection, mainly textile industry in India, and the fall in freights charged on the Eastern voyage added further advantages in their markets to the manufactures of the same industries of Britain and of other industrial countries West of Suez. More important, however, was the fact that European merchants were enabled after the opening of the Canal to establish a good contact with the East and had thus begun to compete strongly in every part of E.E. against the British merchants who were not given any sort of preference therein. Such change in the degree of competition in E.E's market was indeed very notable and must be considered when we come to explain the development of Britain's exports to E.E.(27) We must, however, emphasise that

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(27) See P.P. 1897, Vol.LX, Replies from various parts of the British Empire to Mr. J. Chamberlain's despatch, relative to the growth of foreign competition in their markets.

this analysis should not strictly be applied in the case of Australasia. The strong protectionism which most of the states therein had developed throughout most of the period was bound to offset some of the advantages, or at times all the advantages, which the British or the European merchants had gained directly or indirectly from the Suez Canal and from other forces that revolutionized transport between them and the Western world.

Second: The Growth of Exports of E.E. and the Development of its Imports;

Diagrams (17) and (18) for the foreign trade of India, Straits Settlements and Ceylon, show that there had been a strong correlation between the growth of exports and the growth of imports of each of them throughout the period. Obviously, both imports and exports of these colonies, as well as imports and exports of other parts of E.E., were bound to be influenced by the forces which quickened and cheapened transport and communications between them and the Western world, and also by the building of roads and railways inside them which facilitated the movements goods between the inlands and the ports of shipment. Besides, loans and credit facilities which Britain, Germany and other European countries were willing to extend to E.E. throughout the period, and then were

DIAGRAM (17).

INDIAN FOREIGN TRADE . 1870-1913.

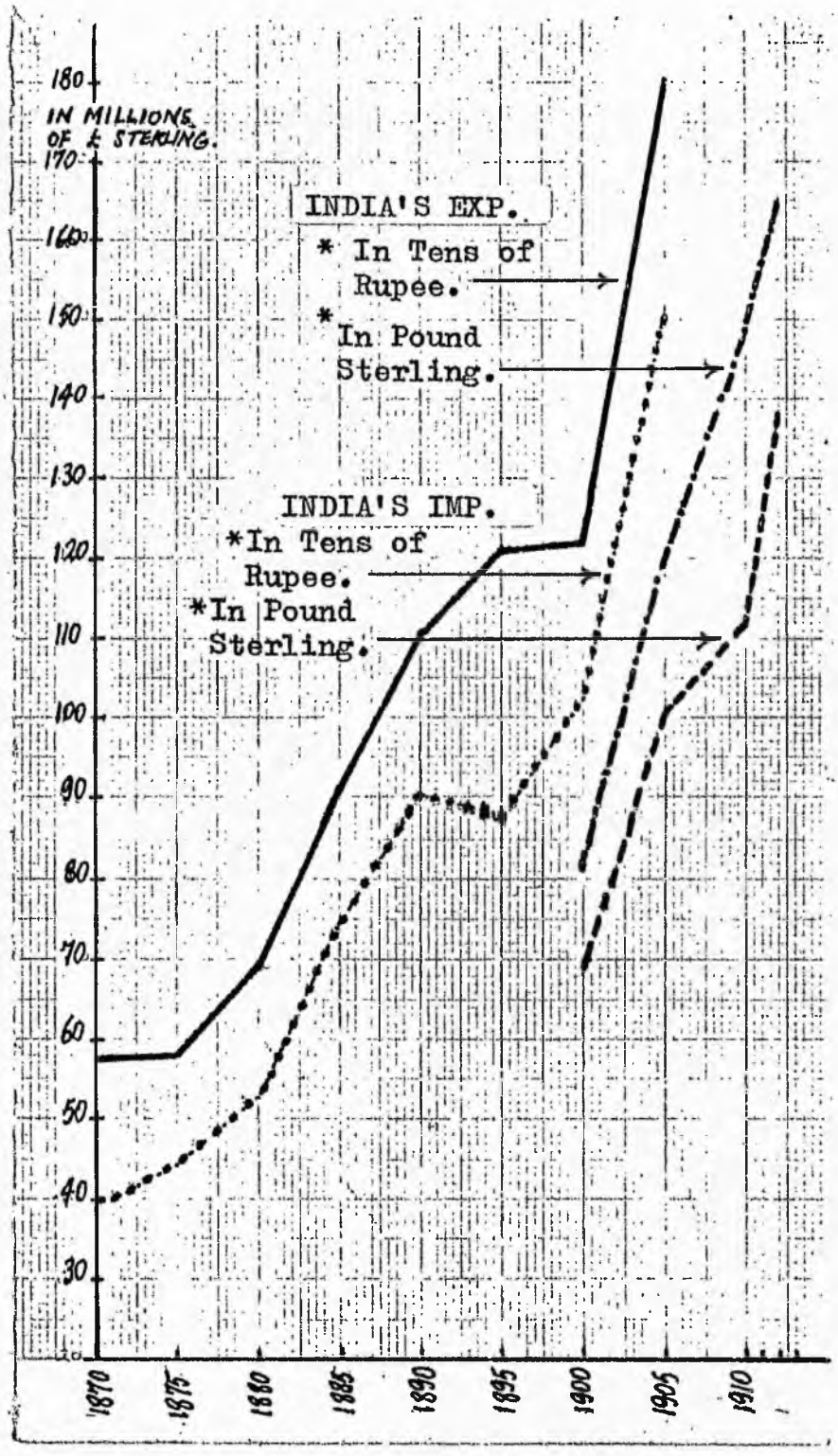
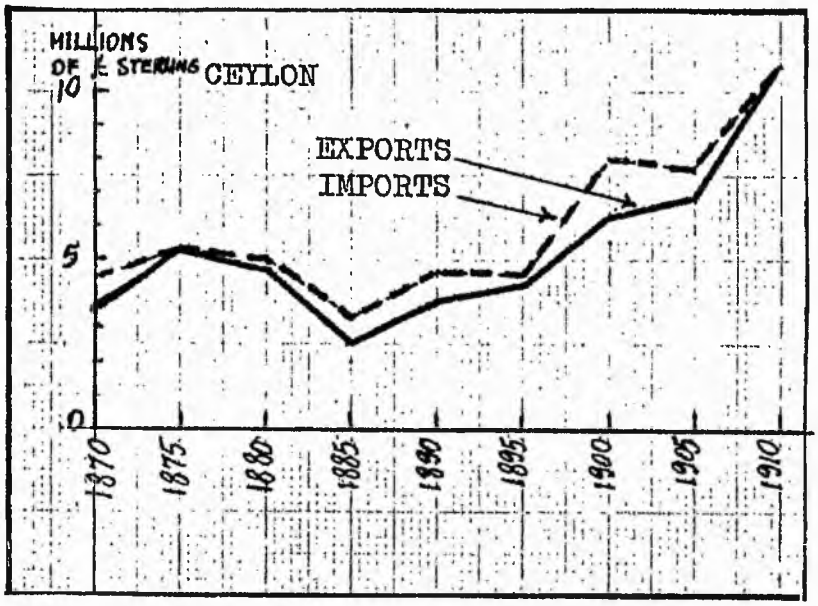


DIAGRAM (18).

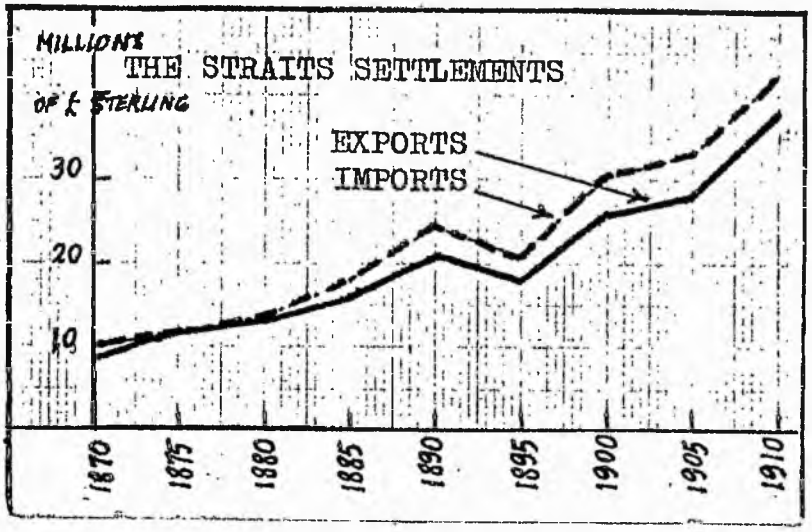
A*CEYLON'S FOREIGN TRADE.

B*THE STRAITS SETTLEMENTS'FOREIGN TRADE.

(A)



(B)



paid back in terms of exports, had played equal parts in the development of imports and exports.

Most important, however, in explaining the parallel growth of imports and exports of India, Straits Settlements, Ceylon and other free trade British colonies in the East was the considerable growth of the value of exports in itself which was consequent upon the revolution of transport. It meant larger purchasing power to the Eastern consumer, and under the influence of free trade policy, naturally tended to promote larger amounts of imports.

Table(16) which is represented in diagram (19) measures the growth of foreign trade of India, Straits Settlements and Australia per head of population in 1870, 1880, 1890, 1900 and 1910.(28) The low figures for India are striking, but they are easily explained by the great density of its population. On the other hand, the extraordinarily high figures of the Straits Settlements were owed to the great entrepot trade which this colony had. The figures of Australia were also high when compared with those of other countries

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(28) The years taken for population, when a census was made, and for trade statistics are not always coincident. Thus strict accuracy is not obtainable, but the errors rising from this are not likely to be significant.

DIAGRAM (19).

FOREIGN TRADE PER HEAD OF POPULATION.

1- Australia.

2- India .

3- The Straits Settlements.

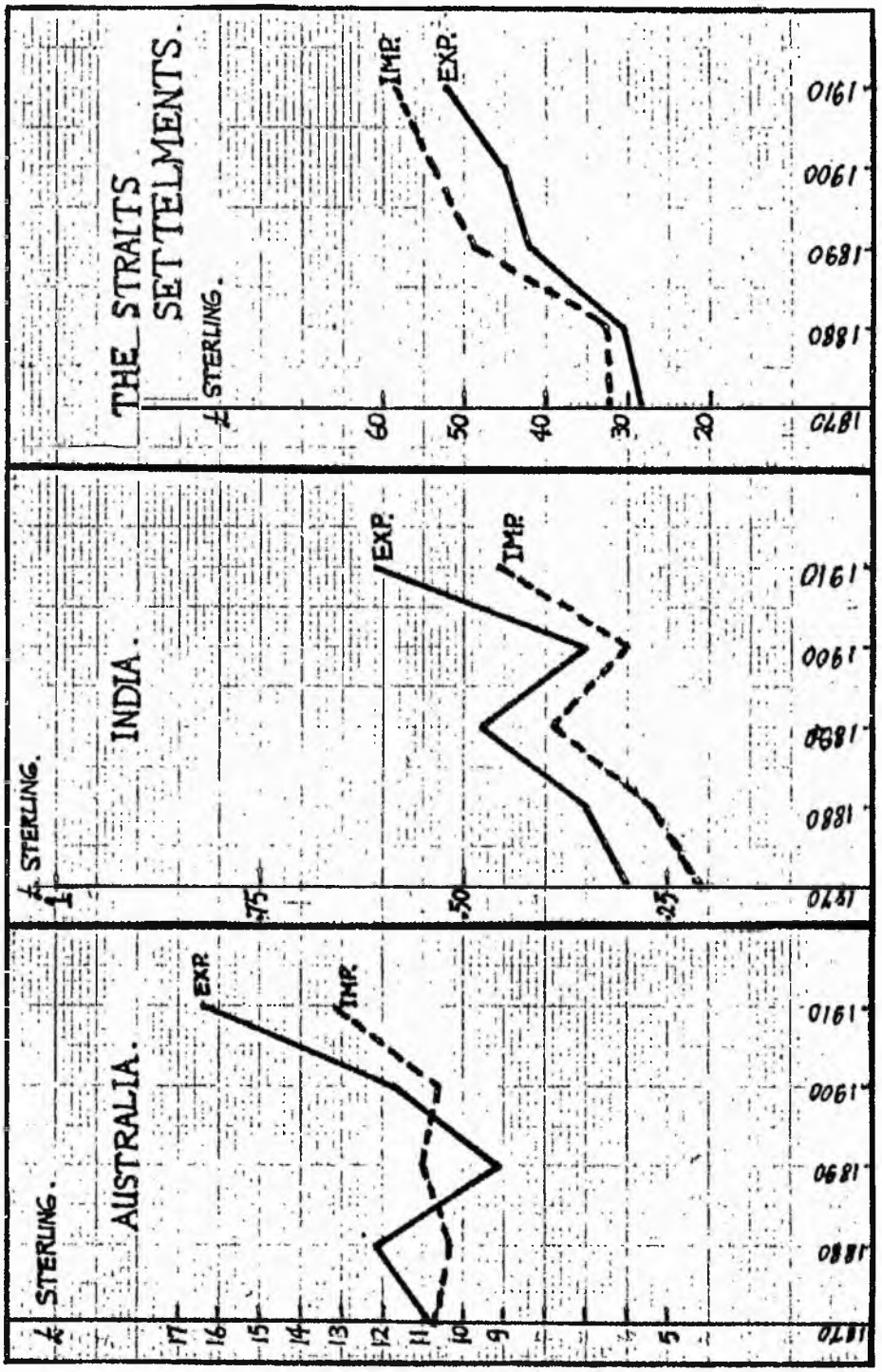

TABLE NO. 16

Foreign Trade per Head of Population in "£"

	1870		1880		1890		1900		1910	
	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.
India	.209	.301	.266	.348	.388	.478	.295	.352	.458	.610
Australia	10.689	10.797	10.276	12.209	10.962	9.137	10.548	11.712	13.175	16.354
Straits Settlements	32.376	28.267	32.554	30.922	48.453	42.080	53.967	45.123	58.889	52.380

during the same period.(29)

The figures of Indian foreign trade support the conclusion which has been reached above, namely that the rise in the income from exports had allowed the Indian consumer, under free trade, to get larger amounts of imports. The fall in such income in 1900 was also accompanied by smaller amount of imports. Again the increase in the imports per head of population in the Straits Settlements, which was partly for re-exports, was attributable to the success of the merchant of this colony in increasing his income from exports of home produce as well as exports of the produce of neighbouring territories.

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(29) For example we get for 1890 the following figures:

	Trade (imports and exports) per head (including Precious Metals)		
	£	S	D
U.K.	21	3	11
Germany	11	1	11
France	11	10	10
Belgium	41	13	8
Cape Colony	13	7	7
Canada	9	6	2
U.S.A.	5	13	8
Australasia	20	2	4

Ref., Coghlan "A Statistical Account of the Seven Colonies of Australia", Sydney, 1892.

As regards Australia, the figures of Table (16), and of diagram (19) show a very different picture from that of India and the Straits Settlements. It seems clear that while different economic forces had succeeded in increasing Australian exports during most of the period at a rapid rate, the strong protectionism which Australia, on the whole, adopted at the same time had discouraged the Australian consumer from increasing his imports. Imports and exports per head of population increased together near the end of the selected period when the Commonwealth of Australia started to move towards a policy of very moderate protection.

British Re-exports of European Produce to E.E.;

Britain's re-exports of European goods to E.E. at the beginning of the period consisted mainly of cotton and woollen textiles, of colours which she did not produce, iron and steel, wine and spirits. The value of this trade showed a rapid increase between 1870 and 1885, i.e., from £1.9 millions to £5.1 millions, almost stagnated during 1885-89 at the same level of 1880-84, i.e., at £4.7 millions, (30)

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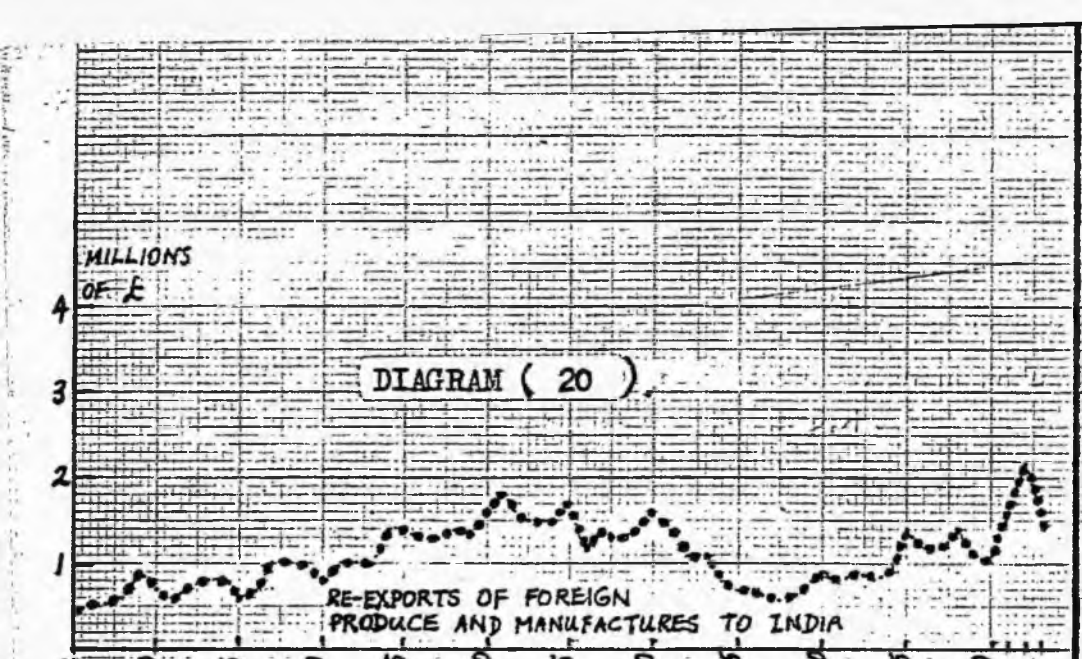
(30) No official statistics were given with regard to re-exports of European goods to E.E. Yet, when examining the statistics of U.K's re-exports to E.E., we would clearly realise that most of the articles were of European origin. Several other indications can be found in the Parliamentary Accounts and Papers to support such conclusion. Some other articles, such as tea and rice were obviously of Eastern origin, but they had been re-exported from Britain to E.E. Nevertheless, these cases were of a very minor importance in the re-exports of foreign and colonial produce to E.E. Figures adopted in this analysis to indicate the re-exports of European produce and manufactures to E.E. cannot be however strictly accurate.
This point would also raise a possibility that some amounts of E.E's produce were re-exported back to them, for instance Indian tea to Australia. But again this might be neglected as almost all of E.E's produce were re-exported to Europe and America.

declined during the 1890's and then increased from £3.1 millions in 1899 to £8.6 millions in 1913. The slow growth of the trade during the latter half of the 1880's and during the 1890's was mainly due to the decline in re-exports, by value, of textiles and iron and steel goods. On the other hand, the increase in the value of this re-export trade after 1900 was very much helped by the growth of re-exports of wine and spirits. It is very important to add here that Britain developed her re-exports of foreign produce and manufactures to Australasia faster than she did with the rest of E.E. Besides the share of Australasia was throughout the period larger than that of the rest of E.E., see diagram (20).

Since British export trade with Australasia was in particular less dependent on the Suez Canal for a considerable part of the selected period, it would be justifiable to affirm the conclusion which has previously been reached about the importance of the Cape route to Britain's intermediate role between the East and Europe before as well as after 1869.

Re-exports of foreign produce to E.E. are shown in diagram (21) in relation to Britain's total export trade to it. It is clear that this trade was considerably less significant than that which Britain derived

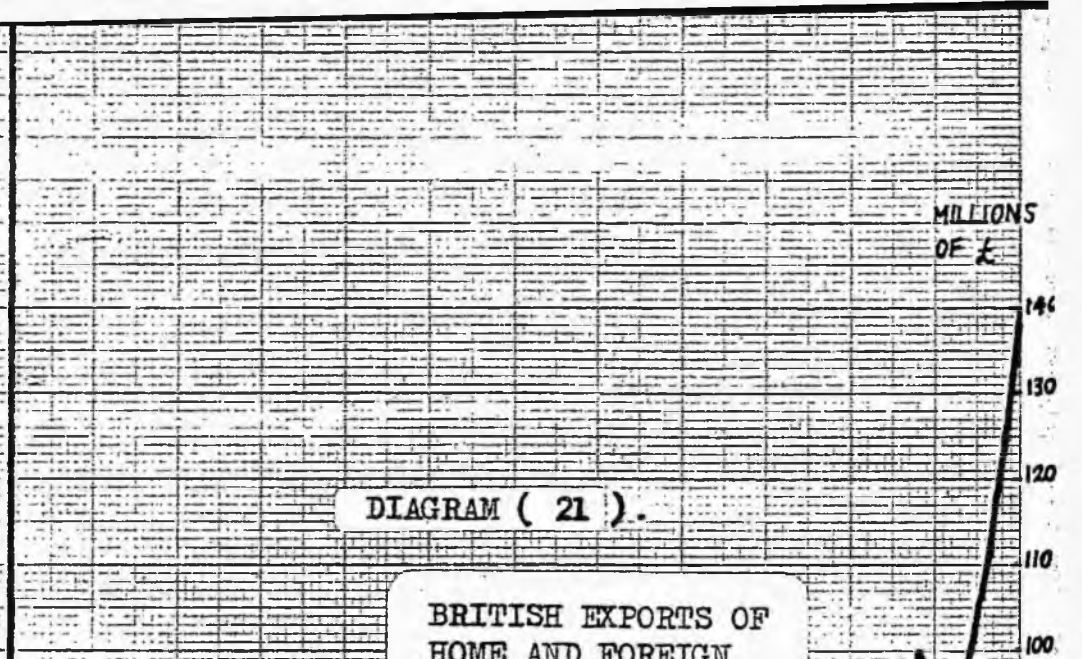
DIAGRAM (20).



BRITISH RE-EXPORTS TO EASTERN EMPIRE.

DIAGRAM (21).

BRITISH EXPORTS OF HOME AND FOREIGN PRODUCE AND MANUFACTURES TO EASTERN EMPIRE.1855-1913.



from her import trade with E.E., see also diagram (22), for comparison. It is not surprising therefore that the changes in the situation of Britain's re-export trade to E.E. during the period had only been of a minor significance to the value and to the structure of her total exports thereto. A final remark about the change in Britain's intermediate role between E.E. and Europe may be drawn from diagram (22). This shows that in spite of the large difference in value between the two re-export trades, which depended on Britain's imports and exports with E.E., these had changed at closely corresponding rates throughout most of the period under review. In the light of the analysis given in this Chapter that situation may be explained as follows: (1) Both of these re-export trades were affected to the same extent by the factors which changed Britain's intermediate role between E.E. and Europe. Thus during the 1870's both re-export trades gained considerably from the opening of the Suez Canal, whilst European competition in the East was still underdeveloped. After the 1870's, but particularly since the late 1880's, Britain's intermediate trade between the East and Europe was seriously reduced by the rise of direct trade between these regions.

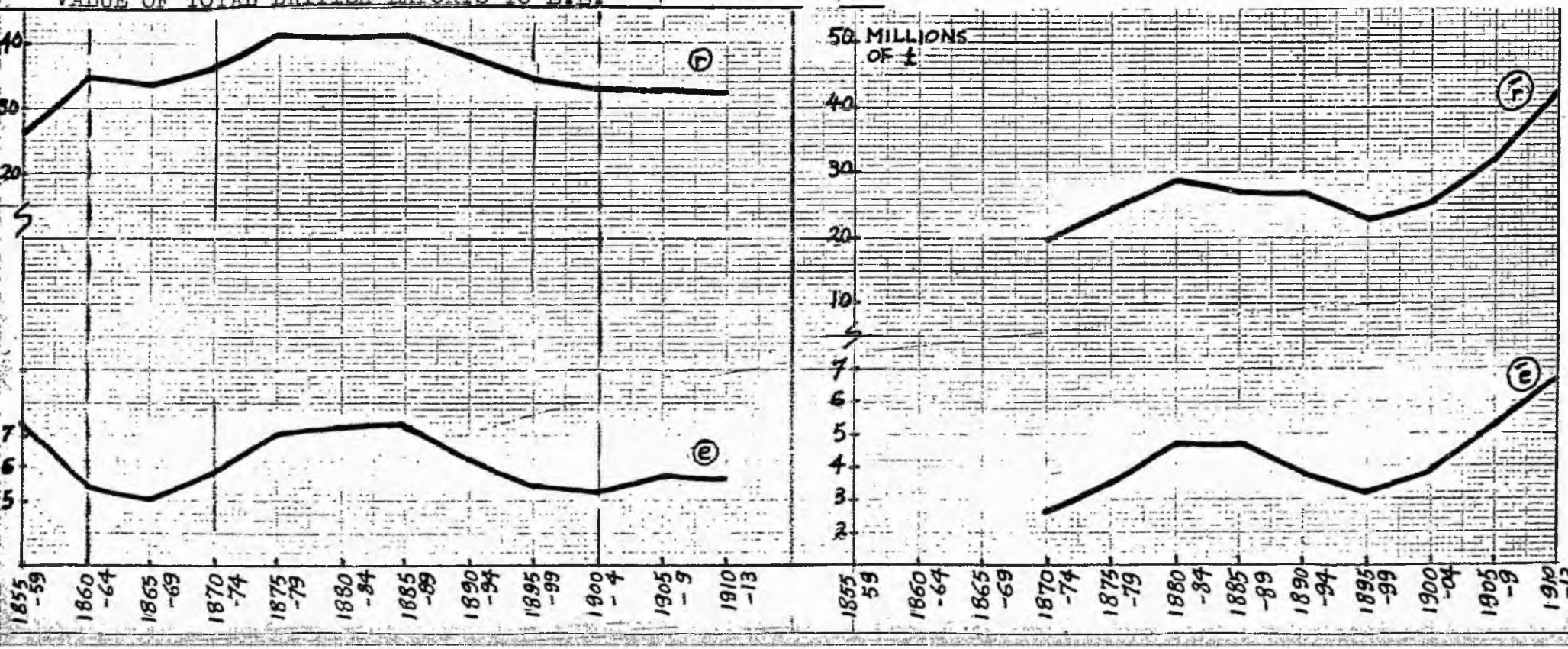
DIAGRAM (22).

(a)

(b)

r = VALUE OF BRITISH RE-EXPORTS OF E.E'S PRODUCE (r).
VALUE OF TOTAL BRITISH IMPORTS FROM E.E.

e = VALUE OF BRITISH RE-EXPORTS OF FOREIGN PRODUCE TO E.E (e).
VALUE OF TOTAL BRITISH EXPORTS TO E.E.



(178)

(2) During and after the 1880's a steep decline in these two re-export trades was checked by the notable rise in re-exports of Australasian wool to Europe and, on the other side, by the increase in re-exports of European manufactures to Australasia which was relatively much less dependent on Suez. (3) After 1895 both re-export trades (as shown in the diagram) showed a continuous increase by value because they largely consisted of groups of commodities which were very highly priced and whose trades between E.E. and Europe were stimulated by further increases in prices during the period 1895-1913. However, the increase in the values of these re-export trades had only maintained, or raised slightly, the lower proportions which they had occupied in British imports and exports with E.E. since the late 1880's. (31)

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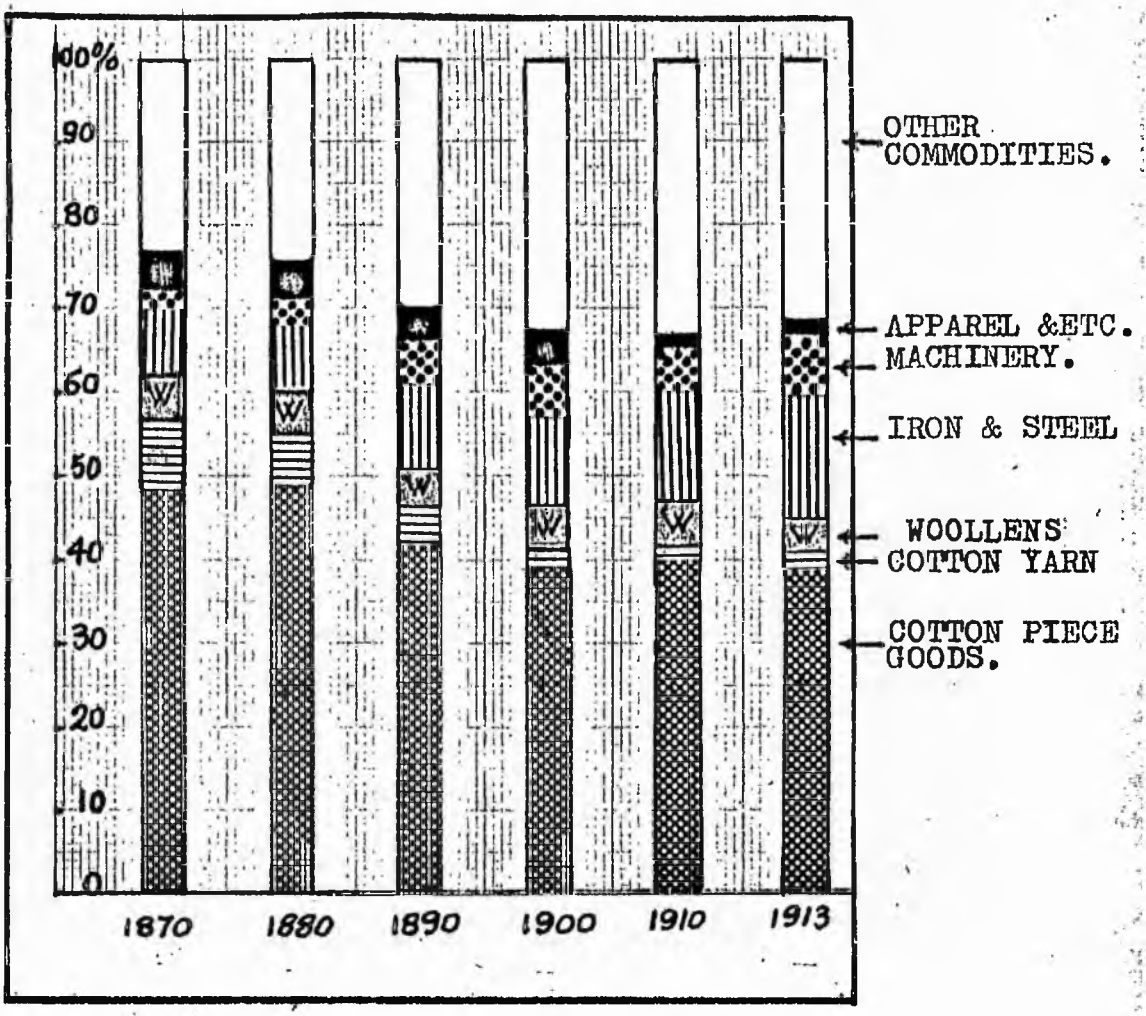
(31) It will be noticed in diagram (22-b) that the curve (F) declined slower than (e) during 1885-1894 and developed faster during 1900-1913. That was due to Britain's ability to develop her re-exports of tea, jute, rubber and tin (besides wool) irrespective of European competition in Eastern trade. (See earlier pages in this Chapter) and these developments were not matched by similar increases in re-exports of European manufactures to the Far East.

Exports of British Manufactures to E.E.

In diagram (23), British exports, by value, to E.E. in 1870 are measured in terms of commodity. It can be seen that total cotton manufactures, i.e., cotton piece goods and cotton yarn, had occupied something like 51% in the value of British exports to E.E. in 1870. India was the largest consumer of these particular manufactures as she alone took 784.928 million yards and 27,023 lbs out of 1,049.810 million yards of cotton piece goods and 41.161 million lbs of cotton yarn exported by Britain to the different parts of E.E. Next to cottons were exports of iron and steel manufactures. Again, the largest portion, i.e., 230,144 tons out of 327,440 tons, was taken by India. British exports of iron and steel manufactures to Australasia, in the same year, totalled 75,835 tons. Australia and New Zealand together took the largest proportions of woollen textiles, apparel and haberdashery, and hardwares and cutlery exported by Britain to E.E. Of machinery exports, which represented 1.8% in total exports to E.E. in 1870, India's share was £288,241 while that of Australasia was £301.394. The figure of exports of British machinery to India in 1870 was, however, lower than the average of 1867-69 and also lower than that of any year during the period 1870-74.

DIAGRAM (23)

THE CHANGE IN THE STRUCTURE OF BRITISH EXPORTS OF HOME PRODUCE AND MANUFACTURES TO EASTERN EMPIRE. 1870-1913.



Between 1870 and 1913 British exports of cotton manufactures, exclusive of cotton yearn, increased from £56.727 millions to £110.595 millions, and of them the shares of E.E. were £18.590m. and £52.204m. respectively. Considering the period on the whole, it can be seen that Britain was able to expand the market for her cotton manufactures in E.E. faster than she did in other foreign and colonial markets. By volume, exports of cotton piece goods increased almost without any interruption till 1886 when they reached 2,448.605 million yards. Average export prices fell from 3.9d. per yard in 1870 to 2.5d. per yard in 1886. Such a considerable fall was a logical consequence of the continuous fall in prices of raw cotton and of the further introduction of cost reducing technique in Manchester's cotton industry. The considerable decline in freights charged on the journey to the East added to the fall in prices, and undoubtedly strengthened the competitive situation of the British merchants trading with E.E. against the growing Indian cotton industry. Only from 1881 to 1885, and in spite of the attempts of the shipping rings to stabilize freight rates, net freights (32) charged on Manchester's piece goods to

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(32) See Chapter 5.

Bombay decreased from 33/- to 19/3d. per ton of 40 cubic feet. No doubt, also, the reduction in the import duties of India in 1878 and their complete abolition in 1882 contributed to the large increase in exports of cotton piece goods therein. In Victoria the largest consumer of British cottons among Australasian states, the item remained duty free until 1878 when a protective tariff was imposed. Yet, in the first few years after the tariff there was not any considerable decline in imports of British cotton piece goods.

Nevertheless, till 1897, exports of cotton piece goods to E.E. were only fluctuating around the high level which had been reached in 1886. The explanation for that can not be found in the movement of prices, as these continued to decline until they reached their lowest point, during the selected period, in 1898, i.e., 2/2d. per yard. Nor was the explanation that the European and the American competitors had succeeded by that time in expanding their exports of cottons to E.E. at the expense of the British. Manchester's cottons were more familiar to the Eastern consumer and satisfied him, and for a similar quality neither the Europeans nor the Americans were able to offer similar prices. Austria, Italy and Germany which started in developing their market in E.E. after 1869, had only succeeded in exporting very small amounts of

cottons into the Indian market, chiefly of colours which Manchester did not manufacture. It must be added here that the competition of the Indian cottons industry did not assume any seriousness till that time, since its capacity was only sufficient to supply a small portion of the Eastern market. In point of fact, the stagnation in exports of cottons to E.E. during the period 1886-1897 could only be interpreted by three factors; firstly, the serious decline in the value of the Indian rupee which led to a considerable fall in the purchasing power of the Indian consumer in the world market. The same analysis would apply equally well to other Eastern colonies whose currencies were based on silver; Secondly, the increase in import duties in India, 1894, and in several states in Australia; Thirdly, the rise in freight rates. The shipping conference succeeded in the period 1885-1894 in raising rates of freight on Manchester piece goods shipped to India. The president of Manchester Chamber of Commerce presented, to the Royal Commission on Shipping Rings - 1909 - much evidence to show that the conference rates in those years were much higher than those charged by shipping firms which were outside the conference. In the late 1880's and till 1895, the rates offered to Bombay merchants by Lines outside

the conference for shipping cotton piece goods from Manchester, varied by one shilling or one shilling and sixpence over 20/- per ton of 40 cubic feet, Meanwhile, the rate which the conference fixed for doing the same job was 60/- per ton and only because of the pressure of the competition from outside steamers the conference was forced to offer to return about 35/- per ton to those who fully supported the conference lines.(33) See also Table (17) For cotton goods going to Hong Kong during the early 1890's, the rate of freight taken by the conference steamers from Manchester via Liverpool and the Suez Canal was 57/6d. During the same period cotton goods shipped via Bremen- which was not under the influence of the conference - and the Canal, were charged a rate which varied by a few pence around 50/- per ton. Much more striking than that were the rates which the conference accepted for shipments of U.S.A's piece goods. Steamers from New York to China, to Shanghai or to Hong Kong, direct or with transhipment at Liverpool, via the Suez Canal, charged a rate of 25/- to 26/6d. per ton for cotton goods cargo. The conference for purpose of competition accepted the carriage of American cotton goods

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(33) Royal Commission on Shipping Rings, P.P. 1909 Vol. XLVII, see Q.615 and subsequent to Mr. Edward Henry Langdon, President of the Manchester Chamber of Commerce.

TABLE NO. 17

The Conference's Through Rates of Freight on Piece Goods From Manchester to Bombay per ton of 40 cubic feet. *

1881 - 1910

	Net Freights S.	D.	
1881	33	0	
1882	33	0	
1883	20	11	
1884	19	3	
1885	19	3	)
1886	24	9	) Higher than
1887	24	9	) free market
1888	27	6	) rates of
1889	27	6	) freight.
1890	27	6	)
1891	27	6	)
1892	23	8	)
1893	23	8	)
1894	23	8	)
1895	20	10.8	
1896	19	6.6	
1897	19	6.6	
1898	19	6.6	
1899	19	6.6	
1900	19	6.6	
1901	19	0.6	
1902	do. "		
1903	do. "		
1904	do. "		
1905	do "		
1906	18	6.6	
1907	do "		
1908	do "		
1909	do "		
1910	do "		

* These were net rates of freight, i.e., Actual Rates charged by the conference after deduction of returns. It was only those who fully supported the conference lines who obtained such rates.

DATA supplied by the President of the Manchester Chamber of Commerce in his minutes of evidence before the Royal Commission on Shipping Rings 1909. P.P. XLVII, 1909.

to Chinese ports, via Liverpool and Suez, at the same rates, i.e., paid 7/6d. to the Atlantic steamer from New York and accepted only 17/6d. for the journey from Liverpool to China. In other words the American cottons had to pay something about 36/6d. to 40/- per ton less than the English cottons when shipped together from Liverpool to China.(34) In such a way U.S. exports of cotton textiles to Hong Kong increased considerably since the early 1890's. This factor in addition to the wide preference which existed in Hong Kong for the colours of the European and American cottons could represent a significant explanation for the fall in British exports of cotton manufactures between 1885 and 1889, and then their continuous fluctuations at lower levels throughout the rest of the selected period.

During the late 1890's and for the rest of the period, the situation of the Indian rupee was improving. The Indian import duty was re-fixed at a lower level, i.e., 3½%, in 1896. Average prices of British cotton started to rise steadily and by 1913 they stood at 3/3d. per yard. However, during this period, i.e., from the mid 1890's until 1913, the conference lines could not maintain the high rates of freight which they tried to establish in the previous ten years. "Bombay Native Piece Goods Merchants", threatened

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(34) See p.331, Hong Kong's reply to Mr. Chamberlain's despatch of November 1895, with regard to the growth of foreign competition in the colony. P.P. 1897. Vol.LX.

the conference firms that they would make contracts with other shipping firms which were offering to carry Manchester cotton goods at lower rates of freight. The conference yielded to the threat and made an agreement with Bombay cotton merchants by which the rates of the Free market had nearly been adopted with no alterations. The "net" rates of freight for shipments of Manchester cottons to Bombay declined steadily from 23/8d, in 1894 to 18/6d. per ton of 40 cubic feet in 1910. It seems that this fall in freight rates in addition to the rise in the purchasing power of the Indian consumer, with the rise in the rupee, had prompted larger amounts of cotton exports to India, in spite of the rise in prices. British exports of cotton piece goods to India totalled 3,057.351 million yards in 1913, larger by 938.951 million yards than the level of 1886.

As regards the Indian cotton industry, there were some signs of a rapid development during, and after, the 1890's. The industry was favoured by cheaper raw material, cheaper labour and by proximity to the market. Yet, it was clear, at that time, that the Indian mills were only able to manufacture the coarser type of cottons. Besides, the free entry of cotton goods which continued until 1917, was no doubt slowing the development of the Indian industry. Nevertheless,

India managed during the period to expand her exports of cotton piece goods to Ceylon, to Mauritius and also to several other places in the East and that factor itself was one of the reasons behind the very slow progress of British exports of cottons to these places since the mid 1880's.(35) Britain's exports of cotton piece goods to Australasia were scarcely developing after the 1880's. The high protection which was assumed therein discouraged the growth of imports from the mother country as well as from other foreign countries and British colonies. As regards the Straits Settlements and Hong Kong, there was a good reason to believe that the high rates of freight which the conference still imposed on British trade with these colonies had worked against the expansion of cottons exports to them.

See diagram (24) for further illustration to the exports of cotton goods to E.E. between 1855 and 1913.

The exports of cotton yarn to E.E. developed from 27.342 millions of lbs in 1886-70 to 50.844 million lbs in 1876-80. In relation to total exports of yarn, the amounts which Britain distributed in E.E. represented about 22% in the late 1860's and about 30% in the late

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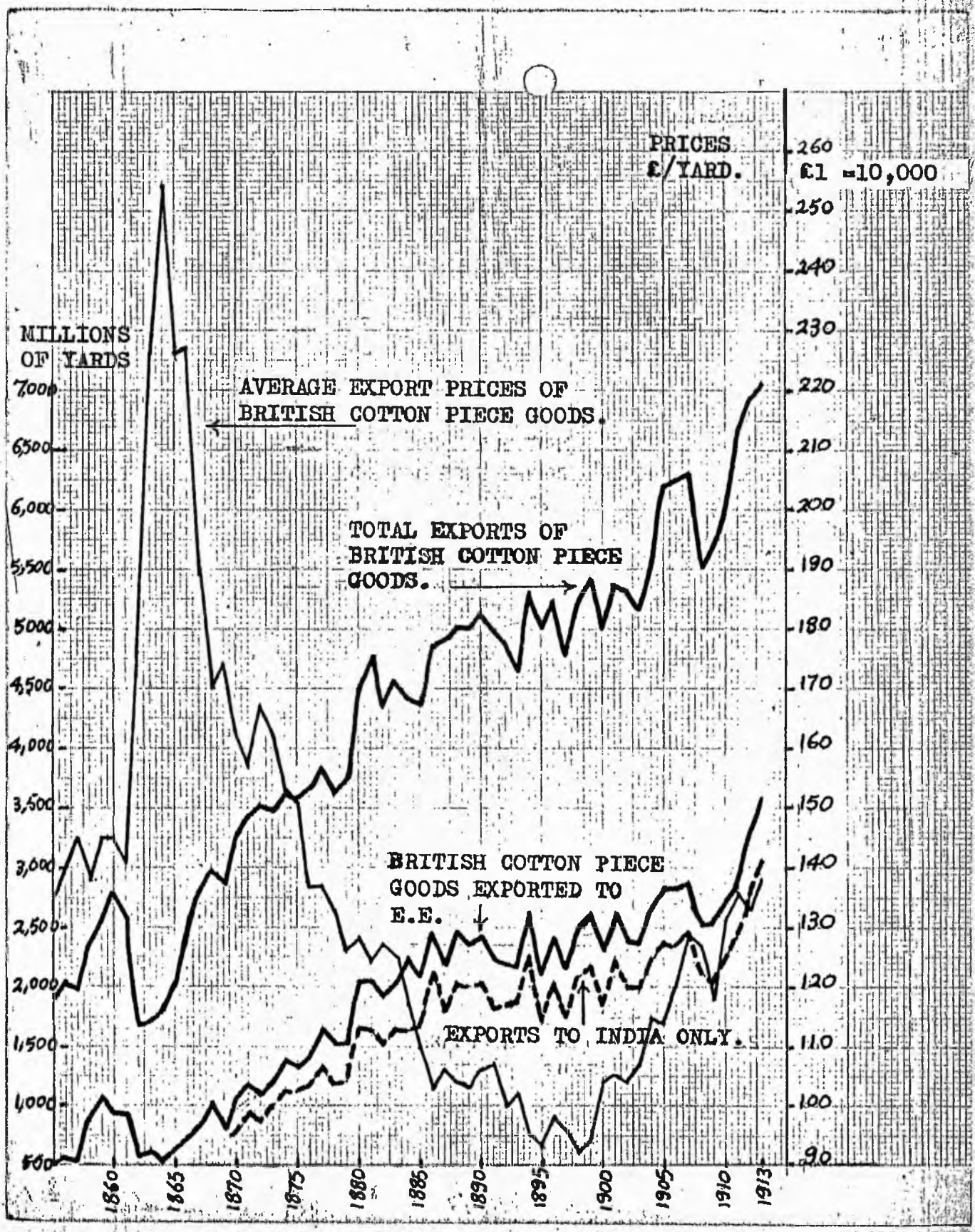
(35) Exports of Indian cotton goods increased steadily from 12,995 yards in 1867-71 to 80,847 yards in 1892-96. It is possible however that some of these amounts were re-exports of English cottons. See Fuchs. C.J. The Trade Policy of Great Britain and her Colonies since 1860, pages 286-287

DIAGRAM (24).


PRICES £/YARD.
£1 = 10,000
MILLIONS OF YARDS
AVERAGE EXPORT PRICES OF BRITISH COTTON PIECE GOODS.
TOTAL EXPORTS OF BRITISH COTTON PIECE GOODS.
BRITISH COTTON PIECE GOODS EXPORTED TO E.E.
EXPORTS TO INDIA ONLY.
7,000
6,500
6,000
5,500
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
260
250
240
230
220
210
200
190
180
170
160
150
140
130
120
110
100
90
1860
1865
1870
1875
1880
1885
1890
1895
1900
1905
1910
1913

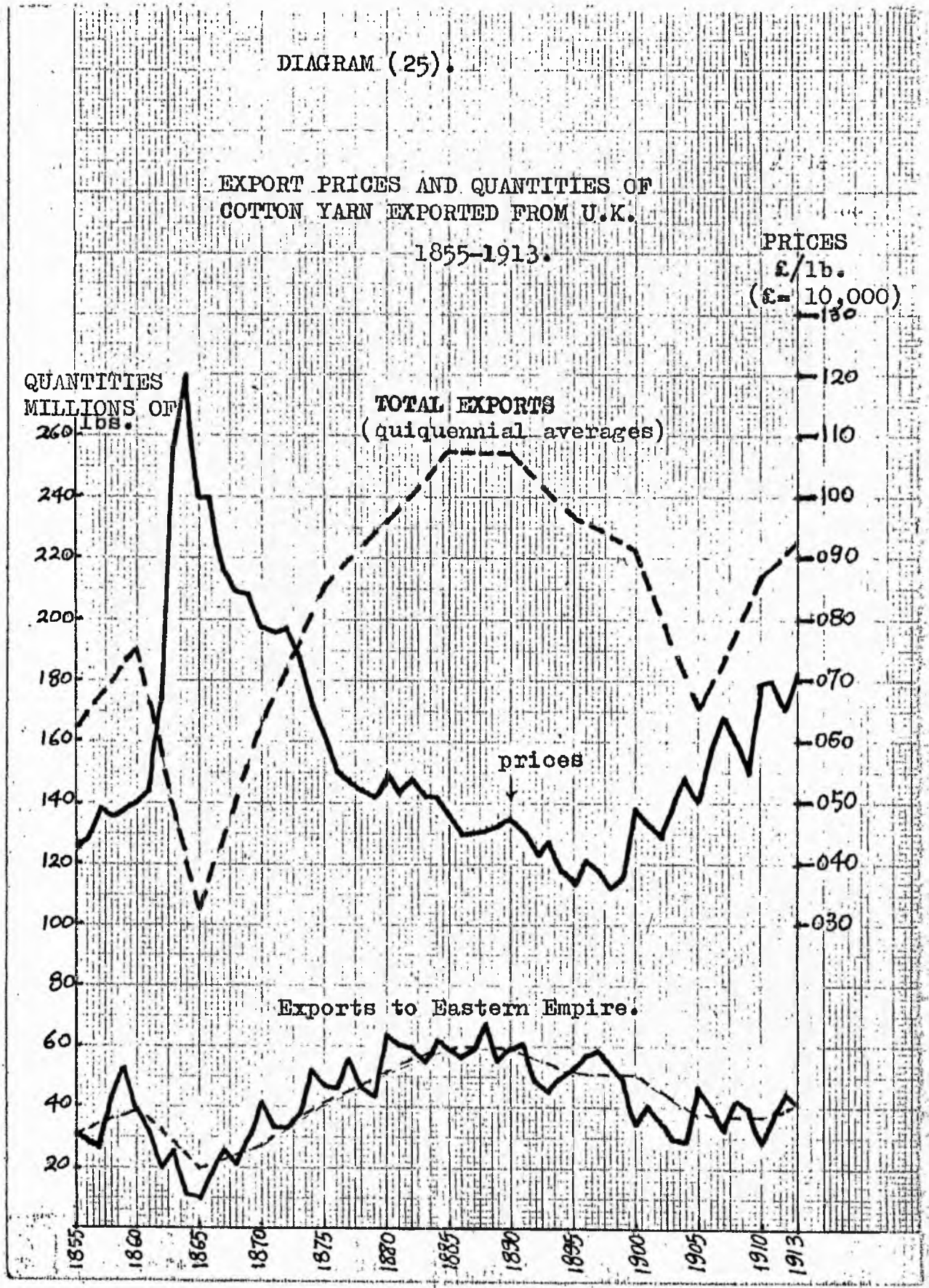
1870's. The considerable fall in average export prices of cotton yarn, mainly because of the decline in raw cotton prices, and in freight rates were undoubtedly the reasons behind the very rapid increase in exports of this manufacture to E.E. during the 1870's. Although exports of cotton yarn to E.E. continued to increase during the 1880's, averaged 59.546 million lbs in 1886-90, their rate of increase was now slower when compared with that of total British exports of yarn. After 1890, except for 1910-13, exports of yarn to E.E. were steadily declining and by 1913 they were nearly equal to their level of 1870. Diagram (25) would clearly show that exports of cotton yarn thereto had been sensitively correlated throughout the period to average export prices. Indian mills were increasing their output of yarn at a rapid rate and were offering competitive prices to the cotton manufacturers in India and, generally, in the East. There would be, therefore, good reason to believe that changes in freights during the period, in so far as they were reflected in prices to Indian importers, were important to the growth of British exports of yarn to India.

British exports of cotton yarn to the Straits Settlements and to Ceylon were affected by the competition of the colourful European yarn. In the Straits Settlements the dyed yarn of Swiss manufacture

DIAGRAM (25).

EXPORT PRICES AND QUANTITIES OF COTTON YARN EXPORTED FROM U.K.

1855-1913.



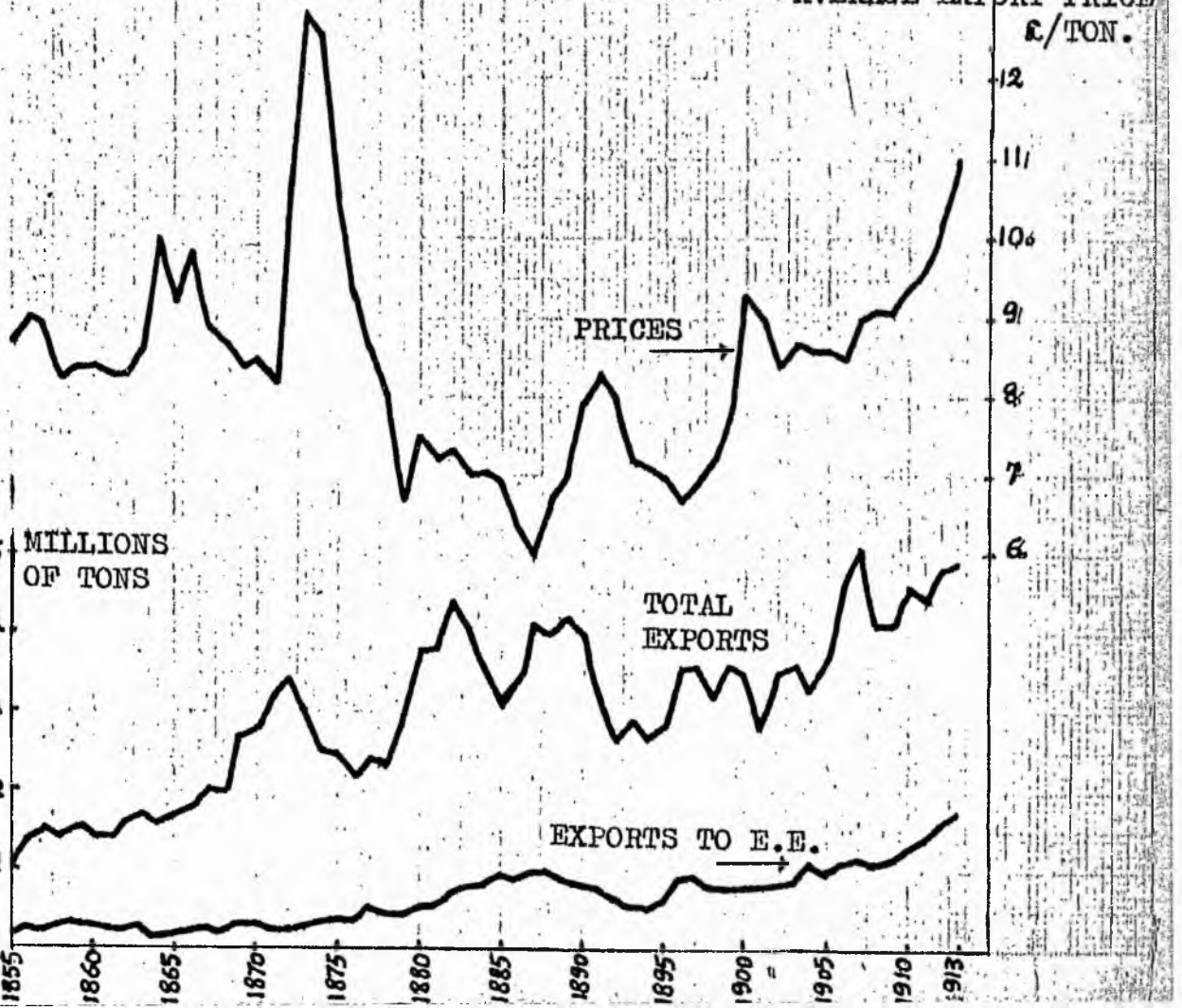
was increasing its hold on the market and in 1895 nearly 30% of the dyed yarn imported into the colony was of Swiss origin. The colour of the yarn was almost entirely red and was not obtainable from Britain. Besides, the price of the British yarn was at least higher by 4 dollars per lb than the best Swiss yarn. Also, the latter arrived to the Straits via European ports at a lower rate of freight than the British. In Ceylon the total value of yarn imported in 1884 was 253,799 Rs., none of which was of foreign origin. In 1889, Ceylon imported cotton yarn at the value of 166,228 Rs. of which 65,880 Rs. were of Austrian origin and the rest, aminly from the mother country. Exports of yarn from Austria represented British yarn imported into Austria, dyed there and re-exported to Ceylon from Trieste. This had never been the case before the opening of the Suez Canal.

The development of British exports of iron and steel manufactures to E.E. is shown by quantity in Diagram (26), for the years 1855-1913. Comparing the two periods 1855-69 and 1870-1913, it can clearly be seen that the rate of growth was much faster in the latter period. Also, when the growth of this particular trade, i.e., iron and steel manufactures to E.E., is measured in relation to the growth of British exports

DIAGRAM (26)

EXPORT PRICES AND QUANTITIES
OF IRON AND STEEL EXPORTED FROM U.K.

1855–1913



of iron and steel manufactures, during the period 1870-1913, we would find that the former had been considerably faster. The share of E.E. in Britain's exports of iron and steel manufactures increased from 12% in 1870 to 35% in 1913. Of the value of British exports to E.E., exports of iron and steel accounted for 7.7% in 1870 and by 1913 it stood at 14.5%. Between 1873 and 1884 exports of iron and steel to Australasia were larger than those to India, but for the rest of the period, i.e., until 1913, the situation was almost the reverse of that. The huge increase in exports of iron and steel to E.E. after 1870 can only be explained by the great expansion in railway building. Nearly 4000 miles of railways were open in India by 1870, over 9000 miles by 1880 and nearly 17,000 miles by 1890. The situation in Australia was also similar to that, when only a little over 1000 miles of railways were built by 1870, then there were more than 3,500 miles in 1880 and more than 9,000 in 1890.(36) New Zealand had 1,250 miles open in 1880 and nearly 2,000 in 1890. Railways had also been expanded in Ceylon and in other parts of E.E. throughout the period.

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(36) These figures are taken from Clapham, J.H. "An Economic History of Modern Britain" 1850-1886, p.213-214.

There had always been various motives behind the building of railways in these different parts of E.E. yet, there would not be any dispute that the purpose of carrying the trade was often the most significant one. By this factor the profitability of a new railway line was fairly measured and, consequently, the willingness of the financiers to provide the required capital for executing the scheme was determined. When the Indian government wanted to build railways during the 1850's and the 1860's, mainly for purposes of fighting regional famines and spreading law and order in the Indian continent, it had to raise the necessary funds through the public debt and to award grants to railway companies. On the other hand, after 1870, British capital willingly poured into India, at an unprecedented rate, to finance railway projects, clearly, because of the new prospects for the growth of the Indian external trade after the opening of the Canal and the development of steamshipping and telegraphic communications between India and West of Suez. (37)

(37) See Cairncross, A.K. "Home and Foreign Investment, 1870-1913" p.188,189,190,192 and 193, for British capital invested in railways in India and in Australia after 1870. Also Nash, R.L. "A Short Inquiry into the Nature of Our Profitable Investment See Knowles, L.C.A., The Economic Development of the British Overseas Empire", p.330,331,334 and 335 for the relation between India's foreign trade and railway building.

To emphasise this fact we might add that most of the newly established railways in India after 1870 were in the wheat districts.(38) The North-Western railway system in the Punjab leading down to Karachi became one of the most important grain lines of the world. In Australia and New Zealand the building of railways after 1870 was influenced by the growth of exports of wheat, wool and farm products, such as meat, butter and cheese which particularly needed quick transport. British capital willingly helped in bringing about the development of railways in Australasia as it did in India. The fall in freight rates of the Eastern route after 1869 was bound to be particularly significant for all heavy goods, such as iron and steel, and to facilitate the growth of their exports. Unfortunately, it has not been possible to obtain any data on freights charged on iron goods which were shipped to Eastern ports during the 1870's. From 1884 to 1893 rates on iron shipped from Welsh ports to Madras declined from 23/- or 24/6d. to 15/- or 16/6d per ton.(39)

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(38) See Fuchs, C.J. "The Trade Policy of G. Britain and her Colonies since 1860", p.288. See also how the Canal stimulated the exports of Indian wheat, in this Chapter.

(39) Supplied by Angier, E.A.V. "50 Years' Freights 1869-1919. See Appendix "B".

Nevertheless, during the selected period, European countries succeeded in developing their exports to E.E. much faster than Britain did. European prices of iron and steel were frequently lower than those which British iron and steel fetched in the Eastern market. Besides European goods were shipped to the Eastern market at lower rates of freight, particularly during the 1890's, for reasons explained before. The statistics of the Indian trade during the selected period showed that the increase in imports from Belgium since the mid 1870's was mainly due to the considerable rise in imports of iron and steel from that country. For the years 1889-93, the report on the Indian trade (40) explained the

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(40) P.P.1893, Vol.LXVI. The report on Indian trade stated that, apart from a short term declining, there was a noticeable decline in India's imports of coal, hardware and cutlery, liquors, copper, tin, iron and steel material, paper, silk, and woollen goods from U.K. "An examination of the returns tends to support the conclusion that, in respect of continental goods which U.K. was the depot for shipment, the trade with India is being conducted direct in an increasing degree, and in respect of British manufactures continental (European) competition is gradually making way".

decline in exports of British iron and steel to India by the rapid increase in exports of iron and steel from the continent of Europe to her. This increase came mainly from Germany and Belgium which depended previously on Britain to re-export their goods but now they had their own ships which came directly to India, via the Canal, and charged rates lower than those charged by British ships. In a discussion held in the Royal Statistical Society in 1898, over a paper delivered on "the Recent Course of Trade within the Empire", the opinion was expressed that British iron and steel exports to India was partly hindered by a high rail cost inside Britain and partly because of a relatively high freight, consequent upon the combination of the shipowners of this country. (41)
In Australia, European competition in iron and steel trade was effectively felt since the early 1890's. Iron and steel of European origin were sold in the Australian market at lower prices. By the 1890's the Germans got a strong hold of most of the Australian market in certain parts of iron and steel trade such as those of nail and wire. However, little in that development should be attributed to the difference in

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(41) See J.R.S.S. 1898. Vol.LXI, p.43 and 44.

freights charged by German and by British ships coming through the Canal, as that was about 3/- per ton in favour of the former. In Hong Kong, bar iron imports in 1893, were almost totally Belgian. Again, that was partly due to the fact that Belgium offered lower prices than the British did, for certain kinds of iron and steel manufactures. More important, however, was the question of freight.(42) Bar iron goods were shipped from Belgium to Hong Kong at 12/6d. freight, per ton, while at the same time the lowest freight which shippers obtained from any British port for bar iron to this colony was 18/- per ton. Also, most of imports of bamboo steel, in Hong Kong, in 1893, came from the continent of Europe rather than from Britain. It was Germany which won this particular market from Britain. "The Scottis h manufacturers, a few years ago", wrote the officials in Hong Kong to J. Chamberlain,"introduced their make , but have been hampered in a great measure by the higher freights charged, otherwise there is no reason whatever, why Scottish manufacturers should not successfully compete."

Throughout the period 1870-1913 Australia remained the largest customer, in E.E., for British woollens,

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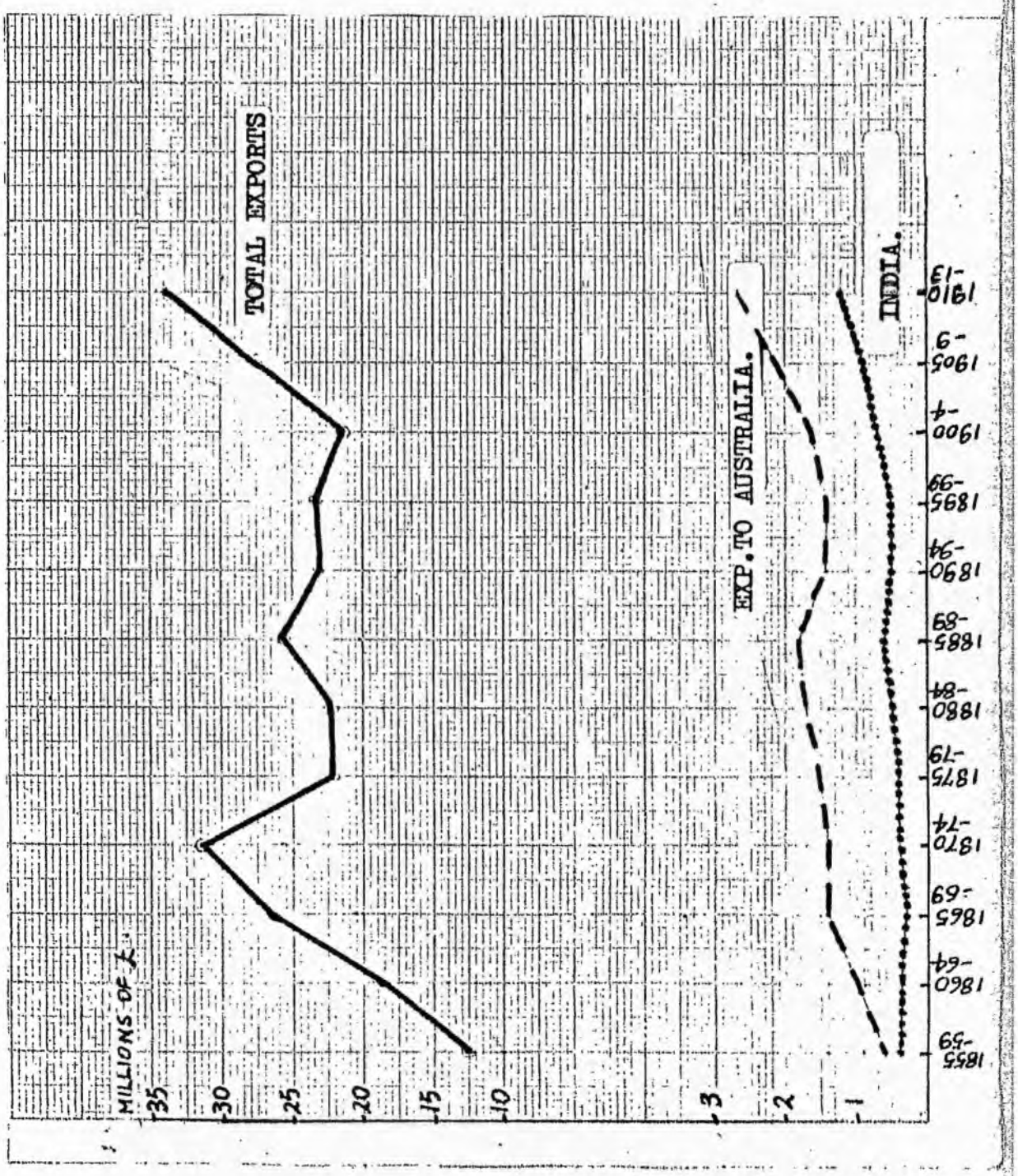
(42) See P.P. 1897. Vol.LX, Hong Kong's reply to Chamberlain's despatch, p.326.

and India followed her in importance. See Diagram (27). Until the early 1890's Hong Kong occupied the third place, but after that date New Zealand replaced her in this position. Exports of British woollens, by value, to E.E. grew at a very slow rate during the 1870's and the 1880's, declined between 1890 and 1894, and then increased at a faster rate, than that of the early period, until 1913. Although such development was, in general, slower than the development of exports of other British manufactures to E.E., it was considerably faster than that of total exports of woollen manufactures during the same period. Thus woollen manufactures exported to E.E. made up for 7.1% and 14.6% of total British exports of woollens in 1870-74 and 1910-13, respectively. It was exports of woollens to Australasia which increased from £.8 million in 1870 to £3.4 millions in 1910-13, or from 2.5% to nearly 10% of total exports of these particular manufactures in 1870-74 and 1910-1913, respectively. Thus, although Australia and New Zealand were developing their woollen industry and had increasingly protected it by imposing high import duties (the same factors which depressed Britain's woollen trade in Europe and America during the last quarter of the 19th century) we can see that other economic forces had interfered into the situation, during the selected

DIAGRAM (27).

BRITISH EXPORTS OF WOOLLEN MANUFACTURES AND WOOLLEN YARN. 1855-1913.



period, and allowed for an increase in imports of British woollens. These particular forces might be found in the rapid growth of population in Australasia during the selected period, the prejudice which had probably existed in favour of British manufactures, particularly among the new settlers from Britain, and the decline in freight in the Australian route. According to data published by the Board of Trade, freights charged on fine textiles from British ports to Australasia declined by about 58% between 1884 and 1893, and in spite of a rise in them after that latter year, they were still lower by 30% in 1900 than their level of 1884. No doubt this decline in freight rates had played an important role in the development of the trade.

In Hong Kong, European woollens were replacing those of the mother country. By the early 1890's, all woollen cloths came from Germany, half of the tweeds and quarter of the flannels came from the continent of Europe, although these were trades which the British monopolised before 1870. The rapid growth of German woollen trade in Hong Kong, and also in Ceylon was a result of their attempts to satisfy the Eastern consumer's taste at lower prices than those which the British asked for their manufactures. Finally, lower

freight rates charged by German ships had, again, been of certain importance to the development of their Eastern trade after 1870.

Britain's exports of machinery to E.E. during the selected period increased from an average of £.7 million in 1866-70 to an average of £7.2 millions in 1910-13 (See Diagram 28). India's share increased from £.4 million in 1866-70 to a little over £3 million in 1900-13. Australasia's shares were £.2 million and £2.7 millions in 1866-70 and 1910-13 respectively. The weight of machinery in Britain's exports to E.E., accordingly increased from 1.8% in 1870 to 7% in 1913. Of total British exports of machinery, E.E. took 25.2% in 1913 compared with 12.3% in 1870.

It is to be expected that the fall in freight in the Eastern route after 1869 was particularly important to such heavy goods as machinery. In 1893 Bowley, A.L., wrote in his "England's Foreign Trade in the 19th Century"(43) that machinery was still 25% dearer in India than in England, yet, such expansion in their exports would have been almost impossible before the improvement of means of transport. However, we must not underestimate the importance of other factors which influenced the growth of machinery exports to

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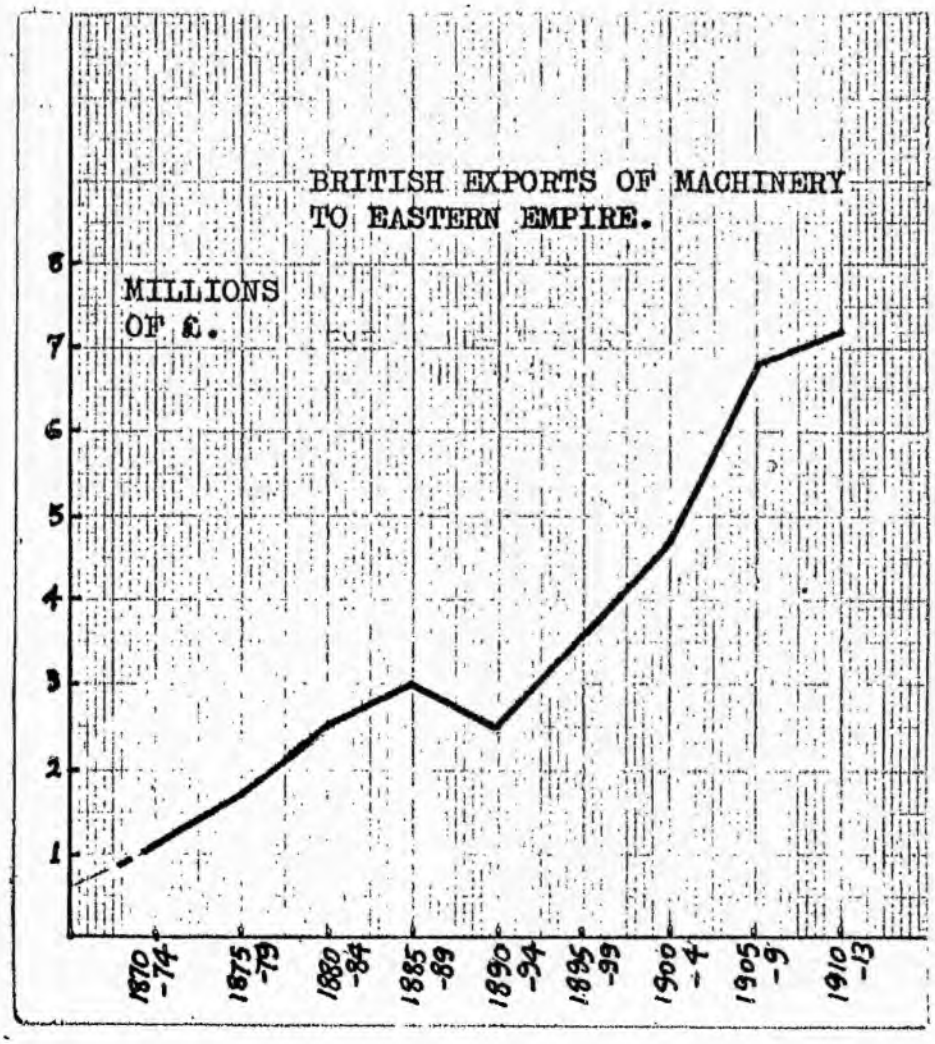
(43) Published in London 1893, see p.89-94.

DIAGRAM (28).

BRITISH EXPORTS OF MACHINERY TO EASTERN EMPIRE
1870-1913.



E.E. during the selected period. The ability of Britain to produce machinery cheaper than any other industrial country in the world, by that time, had been, indeed, an important factor and it had certainly protected her machinery trade in E.E. from European and American competition.(44) In fact, with one exception, namely the trade of sewing machines which had been taken over by the German and the Dutch, the growth of European and American competition in the machinery trade in E.E. was insignificant throughout the period.

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(44) From Hong Kong, officials wrote to J. Chamberlain "At present the rates charged by the conference from Liverpool to Shanghai are - light, 35/- per ton of 40 cubic feet measurement; heavy, under five tons, 40/- per ton; heavy over five tons, 42/6 per ton. Special arrangement is made for any thing above ten tons. Boilers pay about £6 per ton. There is a lot of machinery out just now for the cotton mills lately started in Shanghai and the other industries being started throughout China. Direct steamers from New York are quoting to Shanghai 27/6d. to 28/6d. for light machinery, and 32/6d. for heavy; and probably they will take lower rates for any larger quantity. The Americans manufacture cotton mill machinery, but they cannot manufacture it so cheaply as the British manufacturer can. These lower freights give the Americans the pull. Machinery takes up a lot of space, and freight is a very important item in the laying down price." p. 331, Parliamentary Accounts and Papers, 1897, Vol. LX.

From 1869 to 1913, not even one ton of British coal was exported to New Zealand. The same situation applied also to Australia from 1876 to 1913, with the exception of the period 1892 to 1901 when very small amounts of coal were exported thereto. The reason for that was, clearly, the cheap coal production in Australasia. Coal exports to Ceylon increased from 59,379 tons in 1870 to 333,435 tons in 1901 and then they began to decline and by 1913 stood at 239,657 tons. Ceylon, within E.E., became the largest consumer of British coal after 1900 and it was followed by India and then Aden. Colombo was used after 1869 as a coaling port for almost all British ships on their way homewards, not only from India but also from China, Japan, the Eastern Archipelago and Australasia, and that was why Ceylon took increasingly larger amounts of British coal throughout most of the period. Aden and few other ports in the Eastern coast of Africa, within E.E., were also used as coaling stations for steamers going to and from the Far East. Diagram (29) shows the development of coal exports to E.E. from Britain. The increasing dependence on railways for inland transport in E.E., and on steam ships for foreign trade promoted far more use of coal. However this increase in coal exports to E.E., till the early 1890's would have been impossible without the fall in freight rates -

DIAGRAM (29).

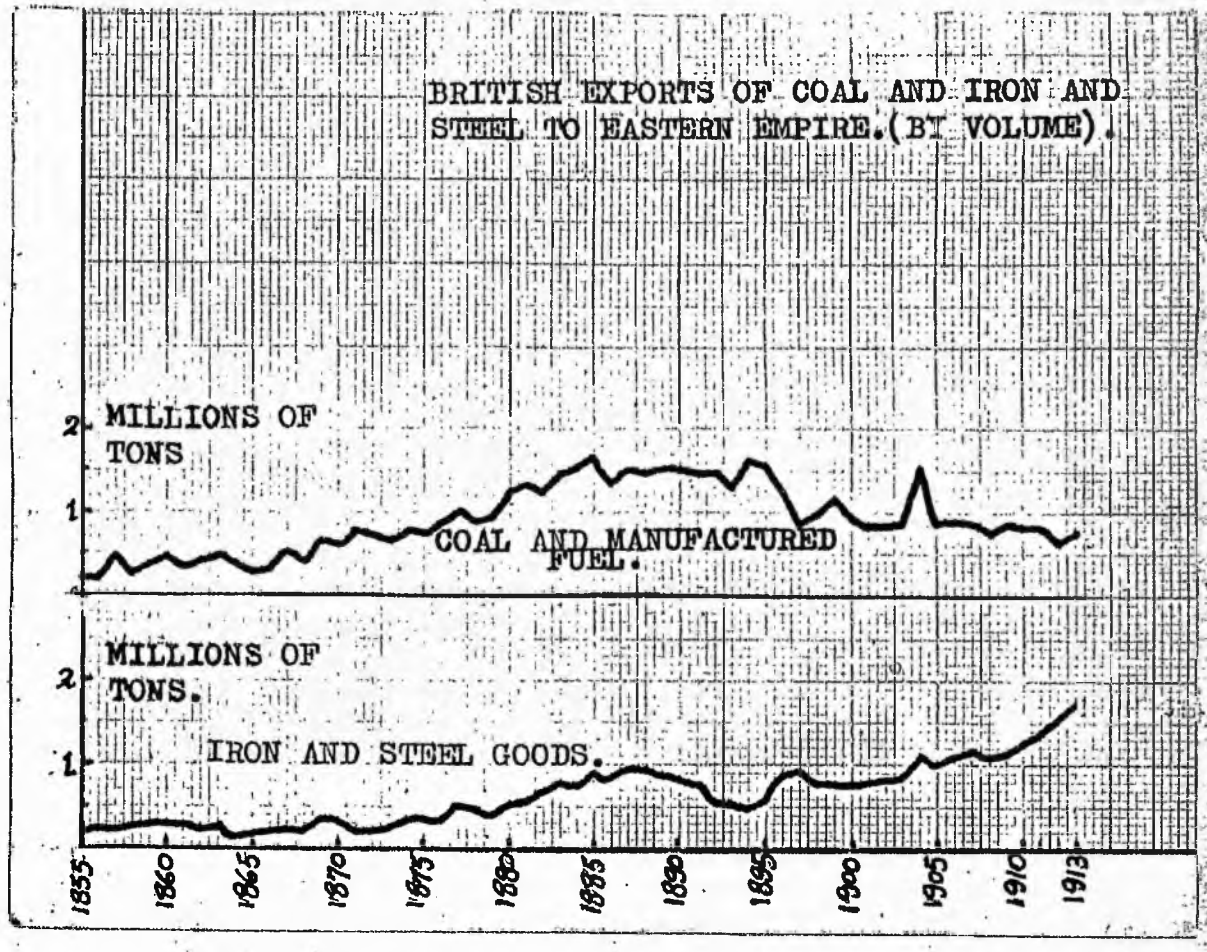
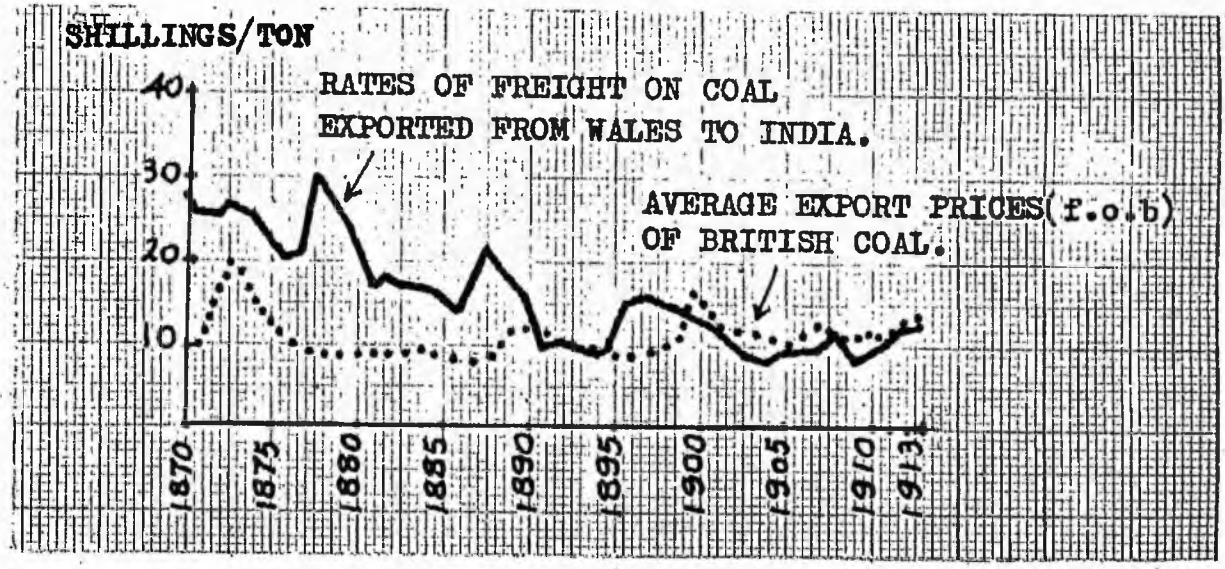


DIAGRAM (30).



See Diagram (30) - as coal production of India was developing at a rapid rate by that time. Yet, from the 1890's onwards when the cheap coal of South Africa, Australia, Japan and India began to flood the Eastern market, British coal exports to E.E. had to decline. The loss which Britain had because of the decline in her coal trade with E.E., was not because the size of such trade, in fact at its peak in 1885 it represented 6.7% of total British coal exports, but because coal exports filled the tramp steamers bound to the East and so kept low the return freights on British imports.

The Development of British Exports to Various Parts of E.E. The Change in British Share in E.E's Import Trade.

In 1870 Britain's exports of merchandise to E.E. totalled £38.2 millions, of which only £1.9 millions were of foreign and colonial origin. Out of this total, exports to India accounted for £20.1 millions and those to Australasia accounted for £10.7 millions. In the third place came Hong Kong, £3.6 millions, followed by the Straits Settlements, £2.4 millions.

India did not represent Britain's largest market in E.E. only, but also in all the world with the one exception of the U.S.A. Of total value of British exports in 1870 the share of the U.S.A. was equal to 12.8% while that of India was equal to 8.2%. Throughout the period India maintained her situation as the largest market for British export trade in E.E. Exports to India increased to £71.7 millions in 1913. This notable rise was only interrupted once during the selected period when exports fell by £9.7 millions between 1890 and 1895. However the relative importance of the mother country in India's total import trade had only grown considerably during the early 1870's and then it began to decline from that time onwards. Thus between 1870 and 1875, the share of Britain in India's imports from all foreign and colonial sources rose from 64.9% to 79%, then it fell to 70.3% in 1895 and to only

57.8% in 1912. Meanwhile, the share of Europe, excluding Britain, in India's imports grew considerably from 1.5% in 1870 to about 11% in the last few years of the selected period. Hence, there is a good reason to believe that the decline in Britain's share in India's import trade was directly connected with the growth in the colony's imports from Europe. In fact the slow growth of British exports to India in the 1890's was significantly correlated to a growth in India's imports from Europe. Britain's share in India's total imports declined from 72.2% in 1890 to 63.9% in 1900, while Europe's share in this particular trade increased from 4.6% to 11.2% between the two respective years.

The importance of the markets of Australia and New Zealand had also increased during the selected period. Their share in the British exports was even developed at a greater rate than that of India. British exports to Australia and New Zealand increased from £10.7 millions in 1870 to £49.6 millions in 1913. A major setback in such growth came between 1891 and 1893, when exports thereto fell by £11.3 millions. Moreover, the growth of this particular trade was relatively very slow in the period 1896-1902.

The relative importance of Britain among all other sources which Australia depended upon in her import trade, increased from 64.0% in 1870 to 74.4% in 1885. That was the period during which European countries had not yet managed in establishing regular steam communications with Australia, via the Suez Canal. Yet, between 1885 and 1910 the relative importance of the mother country in Australia's import trade decreased by 13.2%.

Australia's imports from Europe decreased from 1.6% to 1.2% of her total imports in 1870 and 1880 respectively. Between 1880 and 1910 European countries, in particular Germany, Belgium and France increased their share in Australia's total imports by 10.7%, i.e., their share increased to 11.9% in 1910. Australia's imports from U.S.A. (which also benefited to some extent from the opening of the Suez Canal in her trade with Australia until Panama Canal was open in 1914) increased from 4.0% in 1880 to about 11% in the last few years of the selected period. Again it will be noticed that when Britain's exports to Australia slackened off during the 1890's those of Europe and America grew rather rapidly. In 1890 and 1900, Australian imports from Britain represented 69.2% and 61.3% and those from Europe and U.S.A. represented 14.8% and 23.5% of total

imports in these two years respectively.

The situation of New Zealand was, however, somewhat different from that of Australia. The share of the mother country in New Zealand's imports rose from 57.9% in 1870 to 69.9% in 1885, and although it declined to 61.2% by 1910, this share was clearly still above that one at the beginning of the period. Meanwhile, until the early 1890's the amounts which New Zealand imported from Europe were almost negligible. By 1900 these had increased, yet only to represent 3.0% of total imports in the respective year. Until the end of the selected period the share of Europe in New Zealand's imports was still under 5%. It is possible, however, that some of the increasing amounts which New Zealand imported from Australia were of European origin. The relative importance of U.S.A. in New Zealand's imports grew considerably from 1.3% in 1870 to 11.2% in 1905 and then it fell again to 8.2% by 1910. The notable change in the share of U.S.A. came mainly in the 1890's, i.e., from 5.7% in 1890 to 10.0% in 1900, when the share of Britain shrank by 6.3%.

Apart from the 1890's, British exports to the Straits Settlements had been rising steadily throughout the selected period. They rose from £2.5 millions in 1870 to £6.0 millions in 1913. The share of Britain in the imports of the Straits had, nevertheless,

declined from 25.6% in 1870 to about 11.0% by the end of the selected period. On the other hand the growth of European or American exports to the Straits was not, on the whole, impressive. In fact the share of Europe in the Straits' imports fell from 3.4% in 1870 to 2.3% in 1880 and although it had risen later, it did not exceed 5.0% in the last few years of the selected period. Meanwhile the share of U.S.A. in this particular trade was only a little over 1.0% in 1910.

Thus it can be seen that the situation of Britain and other Western countries in the Straits' import trade was almost opposite to that situation which they had gained in her export trade during the same period.(45) Bearing in mind that the foreign trade of the Straits was mainly carried for re-export purposes, we would realize therefore that the forces which influenced the development of the Straits' entrepot trade during the selected period, mainly the improvements of means of transport, were more favourable to the growth of Eastern produce re-exports to the West, rather than they were to the re-exports of Western manufactures to the East.

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(45) See Table (15).

During the twenty five years ending with 1895, Britain's exports to Ceylon had either remained stagnant at their level of the early 1870's or they declined. However, from 1895 onwards exports to Ceylon were rising steadily, until in 1913 they totalled £4.3 millions or 4.8 times their level in 1870. The share of Britain in the import trade of Ceylon declined steadily, yet at a slow rate, throughout the period and it stood at 25.8% in 1910, lower by 7.3% than the corresponding percentage of 1870. The share of Europe in this particular trade remained almost negligible until the early 1890's and then it jumped to 7.6% in 1900. Yet this share had declined to about 6.0% by the end of the selected period. The reason why the share of Britain and that of other European countries in the import trade of Ceylon had declined throughout was the growth of this colony's imports from India.

From 1870 to 1885, British exports to Hong Kong had not achieved any material progress and they only fluctuated between £3 millions and £4 millions. After 1885, this export trade declined, and it was not before the last ten years of the selected period when it reached, by value, its level of the early 1870's. Foreign competition, mainly European and American, had in fact done much to undermine the British market in this colony throughout the selected period.

Further details about the development of British exports to various parts of E.E., are shown in Diagram (31). Table 15 shows the changes in Britain's share in the import trade of the principal parts of E.E.

In the case of Mauritius, it can be seen that the share of the mother country in imports had decreased between 1875 and 1895, then it began to rise again and by the end of the period it was greater than it had been at the beginning of it. Meanwhile the share of France in Mauritius's imports grew during the seventies and the early eighties, but then it declined and by 1910 it was only 8.7% or lower by 5.1% than the corresponding percentage of 1870. The share of other countries West of Suez in Mauritius's imports did not come up to 5% until the end of the selected period. In fact Mauritius's imports from Britain and other Western countries had been influenced during the selected period by two main factors; firstly, the fall in the income coming from her sugar trade, and secondly, the change in her importance as a port after the opening of the Canal, as it became no longer necessary to call at her in the way to and from India and China.

It will also be noticed from Diagram (31) that Britain's exports to the new parts of E.E., namely Eastern African Protectorates and the Federated Malay States, were growing at a relatively very rapid rate after 1900.

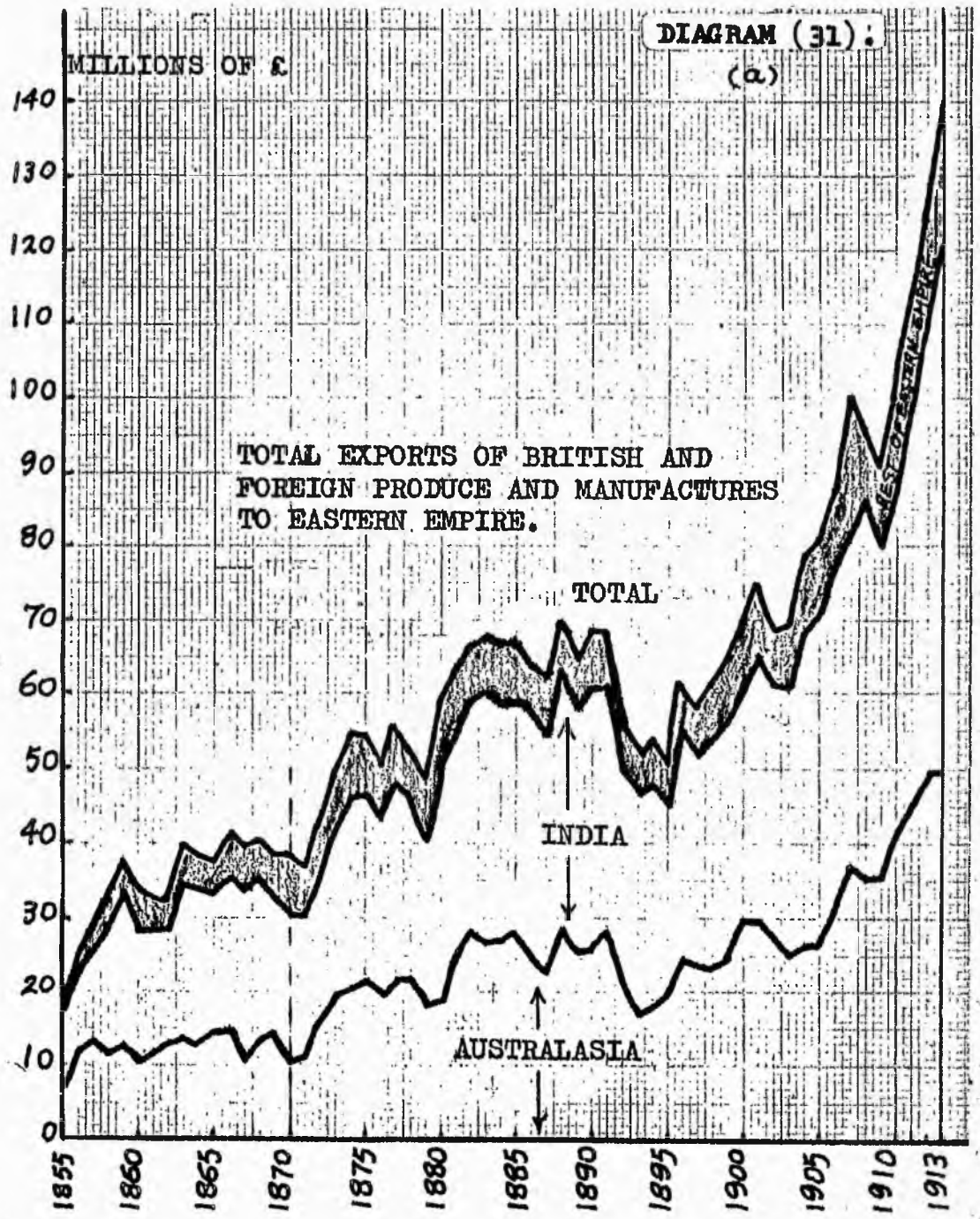
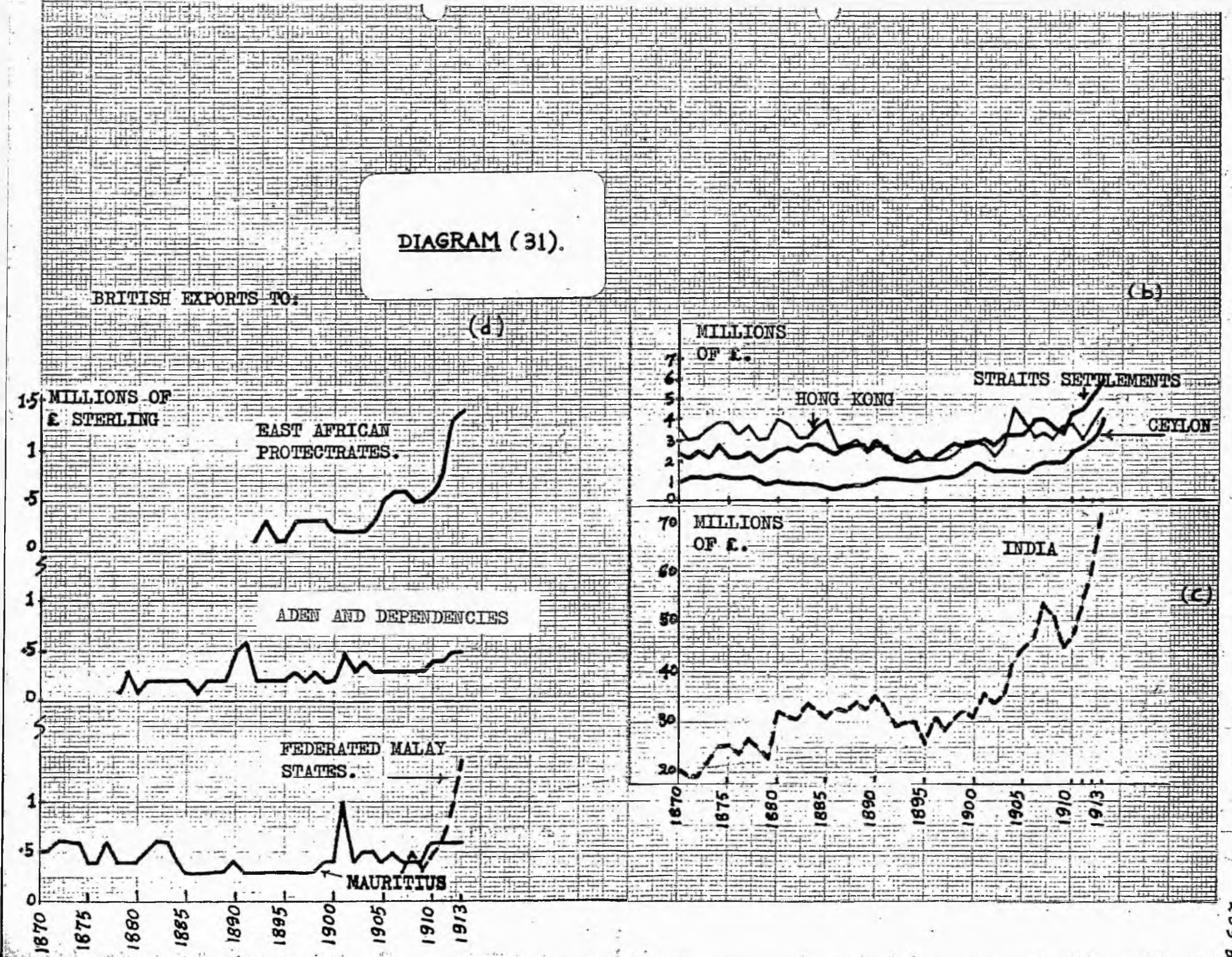


DIAGRAM (31).
(a)
MILLIONS OF £
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
TOTAL EXPORTS OF BRITISH AND FOREIGN PRODUCE AND MANUFACTURES TO EASTERN EMPIRE.
TOTAL
INDIA
AUSTRALASIA
1855
1860
1865
1870
1875
1880
1885
1890
1895
1900
1905
1910
1913

DIAGRAM (31).

BRITISH EXPORTS TO:



Dividing the selected period into quinquennia, we will find that during 1870-74, 1875-79, 1880-84 and 1885-89 Britain was able to develop the exports of her manufactures to E.E. faster than she did in all other foreign and colonial markets, and also faster than she managed to do in this particular market itself between 1890 and 1913. Exports of home produce and manufactures to E.E. increased from an average of £41.6 millions in 1870-74 to an average of £60.3 millions in 1885-89, and this growth corresponded to 17.7% and 26.7% of total British manufactures exported in these two quinquennial periods, respectively. During the periods 1890-94 and 1895-99 exports of British manufactures to E.E. declined to an average of £56 millions and represented 23.9% and 23.4% of total British manufactures exported in these two periods respectively. This fall by value in exports in these quinquennia was partly a result of the great depression in British export prices and partly a result of the rise in the cost of shipping British manufactures to the Eastern market at a time when European goods were carried to the same market at falling freight rates. During the 1890's Britain's share in the imports of Australasia, India, the Straits Settlements and Hong Kong fell substantially as a resuult of the rapid growth of European exports in these markets. During the rest of the period, exports of British

manufactures to E.E. were once more rising rapidly till they averaged £112.4m. in 1910-13, yet their percentage in total exports of British manufactures did not change from the relatively lower level to which they sank during the 1890's. Nevertheless we can see that the relative importance of E.E. to the export trade of British manufactures had increased by 6% between 1870-74 and 1910-13 (and by 7.2% if we take the figures of 1870 and 1913). That happened in a period in which Britain's exports of home manufactures increased from £234.8 millions in 1870 to £474.3 millions in 1910-13 (or from £199.6 millions in 1870 to £525.3 millions in 1913), and which was characterised by a dramatic increase in foreign competition in E.E. market.

However, as our analysis demonstrates, this rise in the share of E.E. in total British export trade was completely achieved during the twenty years following the opening of the Suez Canal. During that period the old established British export trade with E.E. gained considerably from the fall in freight rates in the Suez route as well as in the Cape route. Meanwhile exports of European goods to the East were still hindered by the small demand which existed for them and also by the small size of the European owned shipping fleet.

For further information on the growth of exports of British produce and manufactures to E.E. see Table (18) and Diagrams (21) and (23). The latter diagram shows the change in the structure of this particular trade in some selected years during the period 1870-1913. It can be seen that although textile exports had relatively declined during the period, they still represented the largest percentage in the trade with E.E. On the other hand, the most notable change was that of iron and steel, and machinery, whose exports to E.E. were directly correlated to the internal development of India and Australasia and to the fall in freights during the period.

1863	39.5	37.3	2.2	5.6	25.4
1864	38.3	36.1	2.2	5.7	22.5
1865	37.4	35.8	1.6	4.3	21.6
1866	41.5	39.7	1.8	4.3	21.0
1867	39.2	37.2	2.0	5.1	20.6
1868	40.6	38.3	2.3	5.7	21.3
1869	38.2	36.0	2.2	5.8	19.0
1870	38.2	36.3	1.9	5.0	18.2
1871	36.7	34.2	2.5	6.8	15.3
1872	42.2	39.4	2.8	6.6	15.4
1873	49.0	46.1	2.9	5.9	18.1
1874	54.6	52.1	3.5	4.6	21.7
1875	54.2	50.7	3.5	6.5	22.7
1876	50.1	46.7	3.4	6.8	23.3
1877	55.9	52.0	3.9	7.0	26.1
1878	52.5	48.8	3.7	7.1	25.3
1879	47.5	44.0	3.5	7.4	23.0
1880	58.8	54.9	3.9	6.6	24.6
1881	63.2	58.3	4.9	7.8	24.9
1882	66.3	61.3	5.0	7.5	25.4
1883	67.7	63.1	4.6	6.8	26.3
1884	66.7	61.6	5.1	7.7	26.4
1885	66.7	61.6	5.1	7.7	28.9
1886	63.5	59.2	4.3	6.8	27.8
1887	61.1	56.6	4.5	7.4	25.5
1888	69.7	64.7	5.0	7.2	27.6
1889	64.2	59.6	4.6	7.2	23.9
1890	68.3	63.8	4.5	6.6	24.2
1891	68.2	63.7	4.5	6.6	25.8
1892	56.4	52.7	3.7	6.6	23.2
1893	52.6	49.3	3.3	6.3	22.6
1894	54.1	51.1	3.0	5.5	23.7
1895	50.6	47.6	3.0	5.9	21.1
1896	61.3	57.8	3.5	5.7	24.1
1897	58.2	55.0	3.2	5.5	23.5
1898	61.2	58.1	3.1	[illegible]	24.9
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1900	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1901	74.8	71.1	3.7	5.0	25.4
1902	68.7	65.2	3.5	5.1	23.0
1903	69.1	65.3	3.8	5.5	22.5
1904	78.7	74.3	4.4	5.6	24.7
1905	80.6	75.8	4.8	6.0	23.0
1906	87.6	82.7	4.9	5.6	22.0
1907	100.8	95.4	5.4	5.4	22.4
1908	96.2	90.9	5.3	5.5	24.1
1909	90.5	85.1	5.4	6.0	22.5
1910	100.2	93.7	6.5	6.5	21.8
1911	111.5	104.9	6.6	5.9	23.1
1912	124.6	117.6	7.0	5.6	24.1
1913	140.1	133.5	6.6	4.7	25.4

\+ Re-exports of foreign manufactures to E.E.
Total Exports to E.E.

* Exp.H% = Exp. of home Produce and manufacture to E.E.
Total exp. of home produce and manufactures

Data collected from Parliamentary Accounts and Papers for the respective years.

APPENDIX C

BRITISH RE-EXPORTS OF THE PRODUCE OF THE EASTERN EMPIRE

(1855-1913)

Up to 1904 statistical information on British re-export trade was not available for the values or the quantities of the commodities which were re-exported out of the imports from each foreign country or British colony. Figures were available, however, for British re-exports of foreign and colonial produce to each foreign country and British colony. The latter source of information is used in this research project to indicate the role played by Britain in providing her colonies in the East with their needs of foreign produce and manufactures. Yet, as she supplied her colonies with most of their requirements of manufactured items, Britain's re-exports of foreign manufactures, most probably European, represented only a small fraction of her total export trade to E.E., See Table 18.

However, the role played by Britain in selling the produce of her E.E. was always said to have been of considerable importance to British entrepot trade before the opening of the Suez Canal. Several articles were written, particularly in the 19th century, to describe how the building of the Canal was disastrous to British

re-exports of Eastern produce. Yet, one can not go far in describing this depressing effect of the Canal without more exact knowledge about the value of Britain's re-exports of E.E's produce before and after the opening of the Canal. With the available data it must be scarcely feasible to reach any precise estimation over this matter. However, the estimation which I have been able to make would certainly help in reducing the area of conjecture and speculation. 1904-1913 are taken to be test years for which my estimation is compared with official figures. See Table C-1, in which the errors between the estimated and the declared values of re-export trade of E.E's produce between 1904 and 1913 appear to be very insignificant, except for 1905.

The following procedure has been used:

Firstly:

Assumption;

(1) Let (AT) denote total imports of article A from all overseas sources, by value.

Let (At) denote imports of article A from E.E. by value.

Let (AR) denote re-exports from AT, by value.

Let (Ar), Not Known to us, denote re-exports from At, by value.

The assumption which my estimation depends upon is that,

$$\frac{AR}{AT} = \frac{Ar}{At}$$

$\frac{AR}{AT}$ could be deduced from the data supplied by Parliamentary Papers concerning imports and re-exports of the main articles, in and from U.K. AR and AT are given separately by value as well as by volume.

The reliability of this assumption depends, firstly upon the difference between AT and At. If AT = At it will be 100% reliable. Secondly, if commodity (A) contained more than one grade, and the statistics did not make any distinction between them (e.g., long stapled cotton x short stapled cotton) and At was largely different in quantity from AT - At.

(2) Let M_t denote value of general imports from E.E. Now (by multiplying) $\frac{A_t}{M_t} \cdot \frac{Ar}{A_t}$ would specify the amount which Britain re-exported of A_t at a percent of M_t.

(3) If this procedure could be done for 100% of the commodities imported from E.E.

then $\frac{\Sigma(Ar + Br + Cr + \ldots . Nr)}{M_t}$ would indicate re-exports % in general imports from E.E.

However this can not be done for re-exports of some commodities (of foreign or colonial origin) were not given sometimes even in total i.e., a possibility that $\frac{AR}{AT}$ is not known.

Secondly, the procedure

All the main articles which Britain imported from E.E. were included, and care has always been taken as regards the important changes in the structure throughout the period 1855-1913. Between 1855-1880 most important articles which were imported therefrom were, raw cotton, raw wool, raw jute, rice, coffee, raw sugar, pepper, indigo, hides and tin. What started to emerge as one of the main exports of E.E. to Britain after 1875 while there was a decline in the relative importance of pepper, indigo, sugar and to a certain extent cotton.

With regard to the first criticism the assumption has been made that there was not much fear of any bias as Britain's imports of indigo, pepper, rice and jute came almost entirely from the Eastern colonies. Also imports of wool, coffee, tin were mainly coming from these colonies. However, imports of raw cotton came mainly fromU.S.A., except during the 1860's mainly from India, but yet they represented a considerable portion in general value of British imports from E.E. Moreover, while the U.S.A's cotton was large stapled and needed by Britain largely for home consumption, a large proportion of India's short stapled cotton was for re-export trade. This fact could be shown clearly during the cotton famine when Britain re-exported a larger proportion of cotton

It was Indian cotton and was not much needed for the British cotton industry. Yet as no better alternative was available general percentage of cotton re-exports was taken however and applied to imports of Indian cotton before and after 1860's. Hence we must take the estimation for total British re-exports of E.E's produce before 1860 and after 1869 up to 1880 as lower than they could have been.

After 1880 the most important changes in the structure happened as wheat, meat, butter (and other different kinds of fresh foods) started to occupy a large percentage in value of British imports from E.E. Again these colonies became in the period 1880-1913 one of the chief suppliers of wheat to Britain. Re-exports of wheat, meat, butter, were, however, very low or almost nil in some years in that period and that was the general case whether imports came from the East or from the West. After 1900, rubber and tin grew significantly in importance in the value of general imports from E.E. Again E.E. were the chief source of supplying these commodities and it is quite reliable to use $\frac{AR}{AT}$ to replace $\frac{Ar}{At}$ as it has been explained.

Secondly, the value of the main articles which I considered above constituted not less than 70% of total value of general imports from E.E. and varied in some years between this percent and 90% or over. For the rest

of the commodities sampling method has been used to indicate the general trend of British re-exports of them. One would not exclude the possibility that some rough judgements might have been made in the choice of the sample. However, the slight errors which are obtained in the test years could well support my procedure. Moreover it must be borne in mind that values of imports, exports and re-exports were all given in official statistics as declared by the traders. Thus official statistics of themselves were open to criticism.

TABLE 6-1.

Test Years in Constructing Values of British Re-exports of the Produce of Eastern Empire.

Years.	Re-exports of E.E's Produce as a percent in General Imports therefrom	
	Declared Values %	Estimated Values %
1904	30.7	30.6
1905	25.3	32.0
1906	33.6	34.3
1907	31.9	31.7
1908	35.5	32.2
1909	35.3	32.4
1910	31.6	30.7
1911	32.0	32.4
1912	33.1	33.8
1913	33.6	33.4

EXAMPLES.

YEAR	RAW JUTE			RAW COTTON			RAW WOOL			RUBBER		
	Ar/At	At/Mt	Ar/Mt	Ar/At	At/Mt	Ar/Mt	Ar/At	At/Mt	Ar/Mt	Ar/At	At/Mt	Ar/Mt
1869	.17	.04	.007	.20	.43	.086	.46	.19	.087	.26	.01	.003
1870	.18	.05	.009	.15	.30	.045	.35	.24	.084	.33	.01	.003
1871	.17	.07	.012	.21	.26	.055	.42	.21	.088	.36	.01	.002
1872	.18	.07	.013	.17	129	.049	.50	.20	.100	.39	.01	.004
1873	.18	.06	.011	.12	.23	.028	.46	.22	.101	.33	.01	.002
1874	.17	.06	.011	.13	.23	.030	.49	.26	.127	.38	.004	.002
1875	.31	.04	.012	.14	.20	.026	.52	.28	.146	.38	.004	.002
1876	.25	.05	.013	.11	.12	.013	.48	.29	.139	.40	.004	.002
1877	.28	.05	.014	.11	.08	.009	.48	.28	.134	.47	.003	.001
1878	.25	.06	.015	.10	.07	.007	.53	.31	.164	.54	.003	.002
1879	.25	.06	.015	.12	.08	.010	.60	.32	.192	.62	.004	.003
1880	.23	.06	.014	.13	.08	.010	.55	.37	.204	.46	.01	.005
1881	.28	.06	.017	.11	.08	.009	.61	.30	.183	.52	.005	.003
1882	.26	.06	.016	.14	.14	.020	.61	.26	.159	.58	.01	.006
1883	.27	.06	.016	.12	.09	.010	.64	.26	.166	.41	.01	.004
1884	.31	.05	.016	.12	.11	.013	.58	.29	.168	.52	.005	.003
1885	.38	.05	.019	.12	.06	.007	.66	.25	.165	.50	.004	.002
1886	.37	.05	.019	.11	.07	.008	.53	.27	.143	.59	.005	.003
1887	.35	.06	.021	.14	.10	.014	.56	.29	.162	.48	.006	.003
1888	.33	.06	.020	.14	.06	.008	.53	.29	.154	.50	.005	.003
1889	.33	.07	.023	.13	.09	.012	.54	.26	.140	.54	.003	.002
1890	.33	.07	.023	.11	.08	.009	.53	.27	.143	.52	.003	.002
1891	.33	.06	.020	.08	.03	.002	.56	.27	.151	.53	.003	.002
1892	.33	.05	.017	.12	.02	.002	.62	.29	.180	.53	.003	.002
1893	.38	.05	.019	.15	.02	.003	.54	.28	.151	.48	.004	.002
1894	.35	.07	.025	.14	.02	.003	.54	.28	.151	.55	.004	.002
1895	.32	.06	.019	.12	.01	.001	.58	.28	.162	.61	.005	.003
1896	.31	.06	.019	.10	.02	.002	.49	.28	.137	.52	.005	.003
1897	.33	.06	.020	.13	.01	.001	.54	.28	.151	.61	.005	.003
1898	.34	.06	.020	.11	.01	.001	.42	.25	.105	.65	.008	.005
1899	.35	.05	.018	.17	.01	.002	.43	.23	.099	.73	.006	.004
1900	.39	.05	.020	.12	.01	.001	.34	.22	.075	.54	.004	.002
1901	.40	.06	.024	.12	.01	.001	.49	.21	.103	.62	.002	.001
1902	.30	.07	.021	.15	.01	.002	.51	.19	.097	.69	.002	.001
1903	.38	.04	.015	.17	.03	.005	.50	.19	.095	.73	.004	.003
1904	.36	.05	.018	.12	.03	.004	.46	.17	.078	.65	.008	.005
1905	.33	.06	.020	.13	.01	.001	.45	.19	.086	.65	.005	.003
1906	.37	.08	.030	.12	.02	.002	.41	.20	.082	.64	.006	.004
1907	.40	.07	.028	.14	.03	.004	.41	.20	.082	.56	.01	.006
1908	.31	.07	.022	.15	.02	.003	.46	.23	.106	.68	.01	.007
1909	.37	.05	.019	.13	.02	.003	.50	.22	.110	.65	.02	.013
1910	.34	.04	.014	.14	.03	.004	.42	.19	.080	.57	.04	.023
1911	.38	.05	.019	.15	.02	.003	.39	.18	.070	.74	.04	.030
1912	.37	.06	.022	.13	.01	.001	.43	.16	.069	.76	.06	.046
1913	.38	.07	.027	.13	.01	.002	.39	.16	.062	.73	.06	.047

APPENDIX "D"

The Trade Policy of E.E. during the Period 1869-1913

Throughout the period free trade continued to be the policy of the British Crown Colonies in the East. In 1875 India lowered the average rate of import duties from 7½% to 5%. Nevertheless, demand was still insistent in the British Parliament that India should adopt completely free trade. The preference on the side of the Indian manufacturer was viewed by the British as a burden on the Indian consumer and also implied unfair discrimination against the manufactures of the mother country. In 1882 the demand of Britain was answered, the import duties were abolished and India adopted free trade. However, by 1894 the financial crisis in India because of the depreciating rupee, necessitated a return to a 5% import duty all round for revenue purposes. With the gradual removal of the financial troubles of India, the import duty on a considerable portion of cotton manufactures was refixed at 3½%. Imports of cotton yarn remained almost free of duty all the time, but other import duties in the Indian tariff ranged from 1% to 5% ad valorem.

In Ceylon there were moderate duties about 5% until 1881, but thereafter they were raised and averaged

about 6⅔% for the rest of the period. Yet, imports of cotton yarn and cotton manufactures were treated differently and paid only 4% duty. As regards Mauritius, moderate duties about 6¾% on imports were kept from 1859 till 1881. However, for the rest of the period, i.e., 1881-1913, most of the imported articles in Mauritius were subject to 10.4% duties.

The rest of the British Crown Colonies in the East practised almost completely free trade during the selected period. Yet, the situation of the Australasian dominions was considerably different.

In New South Wales the tariff remained very low till 1892 when some moderate protective measures took place. However, these measures were removed in 1895 and an ultra free tariff was introduced. Victoria raised her duties considerably in 1879 and increased them still more in the following years. By 1895 protectionism in Victoria reached greater heights than in any other country in the world, except U.S.A., as import duties averaged more than 40%. To this situation, there were a few modifications in 1896, but Victoria remained ultra protectionist till the establishment of the Australian commonwealth. South Australia, Western Australia and Tasmania imposed considerable duties on various articles of British and foreign manufacture in 1879. With the exception of

Tasmania, the import duties in these dominions were not as high as those of Victoria.* In the years following 1879, Queensland and Western Australia established high protectionism of their tariff, yet was not so severe as that of Victoria.

After forming the commonwealth of Australia, all the state tariffs were unified. The new tariff was higher than those which formerly prevailed in most of the protected states, yet was still lower than that which Victoria had before. Later, the free trade party gained strength in Australia and import duties were lowered and averaged only 6%. Pig iron, tin plates, steel bars, chemicals and cotton yarn, which in total formed a large proportion of Australian imports were given a free entry. Cotton piece goods, worsted yarn and linens paid 5%. Machinery and woolleh and worsted manufactures were dutiable at 12½% and 15% respectively. As regards New Zealand, duties amounting to 10% were imposed in 1879 on several imported items. In the years following 1879 further increases in New Zealand's tariff took place. In 1881 a duty of 15% on cottons was taken off, but in 1885 and in 1886 there were additions to the tariff, mainly to increase revenue. Later, in the period when New Zealand moved towards free trade, average import duties on the principal items stood at about 9%, and furthermore every article used in agriculture, and in primary productions was free of duty.

* "Free Trade versus Fair Trade" by Lord Farrer and revised by C.H. Chomley, Published by Free Trade Union, London 1904

PART II

CHAPTER V

BRITISH TRADE EAST OF SUEZ AND DISTINCTIVE FACTORS WHICH AFFECTED ITS DEVELOPMENT (1913-1955)

INTRODUCTION.

In Part I it has been explained that the opening of the Suez Canal was essential to the development of steamships but that this rôle was gradually declining in importance as steamship companies trading with the East succeeded in establishing a strong competitive position for themselves. The course of freight rates during the period 1869-1913 was closely linked with the degree of competition which ruled the business of carrying the Eastern trade, and which was influenced by the process of substitution of steamers for sails and also by the rivalry between the new steamship companies and the older ones. Thus, the most notable decrease in freight rates was achieved during the 1880's when that competition was most vigorous. Around the early 1890's the turning point in that process was reached and freight rates started to fall at a much slower rate until they began to rise in the early years of the 20th century. That was a sign which clearly marked the end of the circumstances which the opening of the Canal had created in 1869. From that time onwards the Suez Canal's influence on freight rates was limited to the possible influence of the change in Canal dues, provided that the Canal would always remain open and in suitable conditions for navigation.

The opening of the Canal had also exerted a revolutionary influence on trade relations between the Eastern world and Europe because apart from its influence upon freight it had raised new prospects for the future of Eastern trade. This factor together with free trade policy played a very significant role in the development of the European trade with the countries East of Suez, almost until the outbreak of the first World War. After the War it was clear that other factors began to play a more influential part in the course of that trade. Generally speaking we can say that the dominating position of the Suez Canal was bound to decline in importance in a period of rapid change. In his "Seaways of the Empire" Sarjant, A.J. wrote in 1918 saying "To the present generation, the Canal (the Suez Canal) is so much part of the natural order of things, that we are prone to forget its comparative youth and to ignore the profound changes which it produced in a short period of time in the organisation of ocean shipping and the trade of the world". Similar to other great innovations in the history of transport the Suez Canal diminished in importance after it had achieved its revolution.

Nevertheless this research project is not limited to an examination of the revolutionary change which began in 1869 and continued to influence shipping business and trade for almost forty years. It is also our concern to review the decades that followed the

end of that revolutionary change in order to see whether or not the Suez Canal retained the importance which it had gained during the period 1869-1913. Therefore, in this Part of the research which deals with the period 1913-1955 attention will be given to the factors which affected the dependence of British eastern trade on the Suez Canal and in the light of this analysis we can estimate the importance of that seaway to Britain.

Before looking into the nature and the influence of the factors which determined the dependence of the British trade on the Suez Canal we may, without entering into many details outline this particular trade itself and briefly review the factors which affected its development during the period 1913-1955. For obviously the importance to Britain of the Suez Canal, or any other alternative route, would primarily depend upon the size of the trade conducted with the East.

British Trade East of Suez and Distinctive Factors which affected its Development 1913-1955.

The great depression of prices in the last quarter of the 19th century marked the revival of a very active protectionism in European countries. At the beginning the measures taken were generally limited to tariffs designed to protect native agriculture. In Germany, however, the new protectionism launched in 1879 applied to industrial as well as agricultural goods. The extraordinary growth of the German economy under protectionism had clearly shaken the faith of many countries in the British free trade policy.

With several countries in the world adopting protectionism Britain's agricultural sector was placed under extreme pressure while the expansion of her industries was slowed down by limitations imposed upon them by foreign tariffs. In spite of the revival of imperial preference under J. Chamberlain, Colonial Secretary in the first years of the 20th century, Britain held firmly to her chosen policy until the outbreak of the first War. Britain's example was followed by a few small European countries and by India and the rest of British dependent countries everywhere in the world.

The revival of strong nationalism and militarism in the few years which preceded the first War had, however, weakened the case for free trade in Europe and had its strong echoes in Britain and in her Empire. After the War had closed it was increasingly realized that there were grave difficulties in the way of restoring competitive world markets. There was a very marked increase in protectionism by methods of quantitative restrictions as well as by imposing heavy tariffs, in Europe and elsewhere. These measures were somewhat relaxed during the late 1920's but then came the international crises of the early 1930's and although this crisis was partly a natural result of protectionism, it took away the residue of faith in free trade as a system which could control world trade.

In 1932 the British government decided toembark upon a policy of protectionism. Imperial preference was also resumed and greatly strengthened by the Ottawa agreements which had as one of their objects the development of closer ties between Britain and the Empire. There were separate pacts with each of the Dominions, but the same degree of preference was extended to all of them. The main undertaking given by Britain in these pacts was the maintenance, for five years, of the preferential position created by Import Duties Act 1932. That act gave a free entry to over 80% of all imports from the Empire and subjected the rest to revenue duties

or to pre-1931 protection tariff. Besides Britain made a number of other concessions in order to increase the share of the Dominions in her market. These were as follows; first, duties on butter, eggs, and various kinds of fruit coming from foreign countries were raised from 10% to 15-20%, or more. Also wheat, linseed and unwrought copper were lifted from the free list and became subject to duties. These were the products in which the Dominions had a particular interest. Second, it was agreed to maintain, for five years, the general 10% duties - established by Import Duties Act, 1932 - on a wide range of foreign goods. Third, the existing preference on Empire tobacco was guaranteed for ten years and the preference on coffee was considerably raised. Fourth, it was agreed to restrict imports of foreign meat for the benefit of the Dominions. However, for the protection of her farmers, Britain kept for herself rights to restrict imports of meat from the Dominions if these entered in too large quantities.(1)

Within the British Eastern Empire, India which fully adhered to free trade policy up to the outbreak of the first War, began a policy of protectionism in 1917. The War period with naturally much less competition

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(1) F. Benham. Great Britain under Protection, p.91-94. See also pages 95-98.

from Europe had stimulated industry in India and made a case for protectionism. When Ottawa agreements were signed Australia, New Zealand and Canada included general clauses promising "to protect by tariffs only those industries which were reasonably assured of sound opportunities of success and to keep protection duties at a level that would allow U.K. producers full opportunity and reasonable competition on the basis of the relative cost of economical and efficient production." India, however, could not offer a similar promise, presumably because it started industrialization much later than the white British Dominions. India held to a policy of giving special protectionism to infant industries and reducing it once they were established.

In spite of the promises given by the British Dominions their tariffs sometimes rose even faster than foreign tariffs. Meanwhile it was not a mere tariff protection in India which imposed limitations upon the produce of Britain, but it was also the new nationalistic attitude which called for the preference of Indian produce.

During the 1930's the shadow of another great war was increasingly growing and tariffs were raised everywhere in an attempt to stiffen national control over international trade and to deny any benefit to rivals who were potential enemies. Under these circumstances the course of international trade was certainly throttled.

Nevertheless Britain's trade with her Empire was relatively increasing at a faster rate. Some economists have tended to attribute that favourable growth of the British trade with Empire countries to the signing of Ottawa Agreements.(2) Yet there were certainly other important factors which affected the situation.(3) Thus, Britain's textile exports to India had severely diminished in the inter-war period but her exports of machinery and iron and steel products to that country had increased for the same reason, i.e., industrialization. Raw jute imports from India had decreased, but imports of jute textiles therefrom had increased, etc. Another important factor was the fact that Britain did not always demand immediate payments when goods were bought by the Empire during the 19th century or during the early decade of the 20th century. Generous credit terms were arranged. Now during the inter-war years repayments of debts, often in terms of goods, had enabled the volume of trade to grow continuously larger.

During the years 1914-1918 the U.S. emerged in the world as the greatest industrial power. From 1913 to the late 1920's, 1926-29, the U.S. was able to increase its share of world industrial production from 35.8% to 42.2%. Meanwhile Europe's share fell from 46.3% to

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(2) Schlote, W. "British Overseas Trade from 1700 to the 1930's" see page 89.

(3) The Economist, May 1937

40.7% of world industrial production during the same period. The rise of the U.S. was reflected in a faster development of its international trade, but the development was most notable in the market East of Suez. Active attempts of European countries to invade, or redistribute, the Eastern market during the late 19th century and up to 1913 had suddenly come to an end with the outbreak of the War. German goods disappeared completely in the Eastern markets almost until the mid 1920's. That, obviously, left a vacuum which Britain was not able to fill completely since her industrial production was also hard hit by the War circumstances. The opportunity was therefore available for the U.S., and also Japan to take larger shares in the Eastern market. But even after Britain and the rest of Europe had begun to restore their dominant position in that market, U.S. exports to Asian countries and to Australasia continued to increase. U.S. imports from the East were also rising rapidly. Between 1913 and 1924, U.S. imports from Asian countries increased from 16% to 31% of its total imports. The opening of the Panama Canal had played an important role in this respect since it had quickened and cheapened transportation between Asian and American ports. The growth of American imports from the East had certainly had its influence upon the growth of British imports from that hemisphere. Yet it had also another indirect

effect. During that decade Britain had a favourable balance of payments in her trade with Eastern countries and thus obtained a good deal of their dollar earnings which she spent in increasing her imports from the dollar areas in the Western Hemisphere.

However, the level of American imports from Asia, particularly from India, Ceylon, Malaya and the Dutch East Indies reached its highest level in 1928 and then started to decline. The following passage is quoted from J. Condliffe's "The Commerce of Nations": "In 1938, the U.S. had imported from India, Burma, Ceylon and the Dutch East Indies raw materials to the value of $361 million. Ten years earlier, imports from these countries had been $586 million, equal after the 1934 devaluation to $992 million of the present currency. In 1946 and 1947, imports from these countries were negligible". That was doubtless due to the great American expansion in the production of raw materials and foodstuffs.

The first War had not greatly affected the position of the British Empire. Britain's political dominance over countries in Asia, Africa and other parts of the world remained almost unchanged. Only in India some experiments towards a sort of indirect rule were practised.

That situation was different from what happened to the Empire after the second World War. The War

which lasted from 1939 to 1945 had greatly impoverished Britain and at the same time gave an extraordinary political prestige in world affairs to the U.S.A. and U.S.S.R. These factors helped to explain why Britain could not retain her colonial strength in the post-war period. On the other hand the period of the War for several reasons had fostered the growth of a strong wave of nationalism in British dependencies as well as in European dependencies, everywhere in the world. The years which followed the Second War had therefore witnessed the dissolution of the British Empire. In 1948 India achieved independence and in accordance with the wishes of the Hindu and the Moslem populations it was divided into India and Pakistan. Ceylon, Burma and Borneo also became independent in the same year, while steps were taken towards giving Malaya an independent federal government. However, for the period under review in this Part, 1913-1955, no great change had taken place in the position of British colonies in the Eastern coast of Africa, Hong Kong, Mauritius, Seychelles and Aden protectorates. Other territories in South Arabia and around the Persian Gulf were also retained under British protection.

Political independence was bound to change the trade relations between Britain and her former Empire. The newly independent countries were not necessarily

going to plan their economies or their foreign trade in a manner which would keep those to the former colonial power. Yet, two factors were now preventing such change from taking a serious form immediately after the Empire was reorganised. First, the fact that British Colonial policy in the past decades had done so much to establish a united Empire on the basis of mutual trade interests. Second, that independence to British colonies was in fact given gradually over several decades in increasing doses so that when it was fully granted it was not followed by a revolutionary change in the attitude of the independent peoples towards the former occupying power. Thus, we find that only Burma withdrew from the British Commonwealth, while India, Pakistan and Ceylon willingly accepted to continue with Britain their trade and political relations almost without any notable change. One should emphasise, however, that these factors prevented only a sudden change, for in the longer period other economic and political factors would most likely increasingly loosen the ties which connected Britain in the past with some countries in the Eastern world. Inter-Eastern trade already started growing at a faster rate in the post-war period. Also U.S.A. and U.S.S.R., each in its own way and each for its ownreason, were also actively pushing their economic and political influence in the newly independent world. On the side

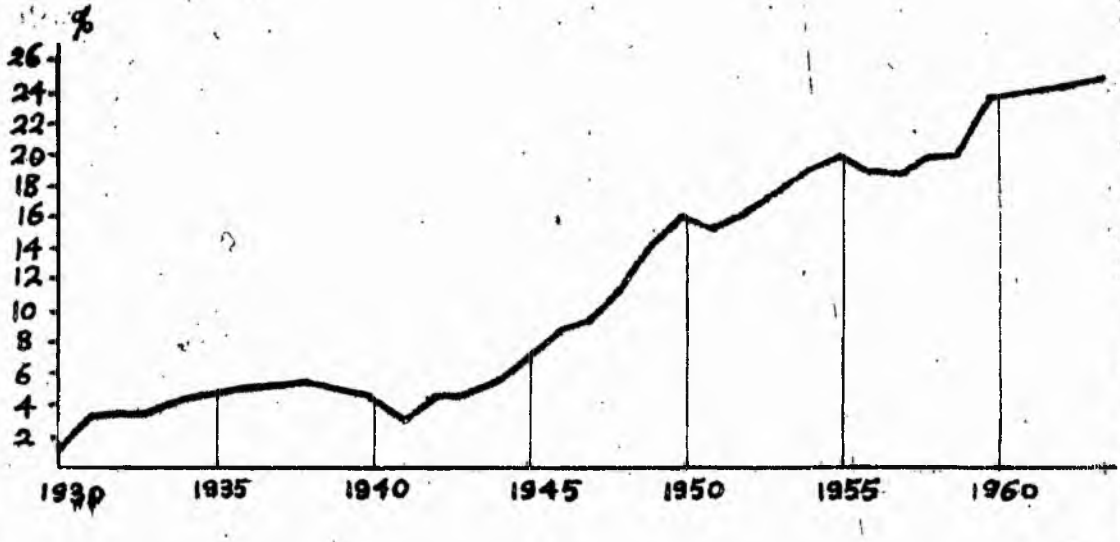
of Britain there were also new factors which started drawing her closer to the Western world. In 1947 Britain was already buying 42% of her imports from the Western Hemisphere. On the other hand she was selling there only 14% of her total exports. In the pre-war period Britain was able to get some dollar payments in her trade with the East, but now this situation was changed since U.S. imports from that hemisphere had greatly diminished. Britain therefore had to concentrate in pushing her exports in the U.S. and in other dollar areas in the West in order to earn sufficient dollars for financing her imports from them. The end of the European colonial Empires, the appearance of the U.S.S.R dominating the socialist group of Eastern Europe, and the extraordinary growth of the U.S. as a world economic and political power were all outstanding post-war features which urged Western European countries to look for closer co-operation between them. Already in the immediate post-war period some new organizations, such as O.E.E.C and E.E.C. had begun their work to achieve more inter-European economic co-operation.

The steady spectacular development of Middle East oil production, particularly during the post-war years, has, however, created new British interests in the East of Suez. The discovery of oil in Iran at Masjed-i-Sulaiman in 1908 and then at Haft Kel in 1928 were only the beginnings of a series of great discoveries

in the Middle East area. The 1930's were undoubtedly the most basically creative years in the history of the Middle East oil industry. In Persia no less than four prolific new fields were discovered. In Northern Iraq oil was found in considerable amounts at Kirkuk; Bahrain came into production in 1935 and just before the outbreak of the War the existence of rich oil fields in Saudi-Arabia, Qatar and Kuwait was established. The richness of the main fields in the Arabian area around the Gulf was indeed extraordinary and unexpected if measured by any standard.

Between 1946 and 1955 total production from the five main oil producing areas, Kuwait, Saudi Arabia, Iraq, Iran and Qatar increased from 35 million tons to an annual rate of 158 million tons, a rise of about 360%. Middle East oil production as a percentage of total world oil production had therefore increased from about 8.5% in 1946 to about 20% in 1955. See also Diagram No. 32. With some minor exceptions to be made in the cases of Iran and Iraq all oil production of the Middle East was not required for local consumption and therefore was almost totally exported. Thus while Middle East oil exports rose more than threefold from 1949 to 1954 those from the rest of the world went up by only one fourth. Diagram (33) shows the importance of Middle East oil exports in total world trade of oil.

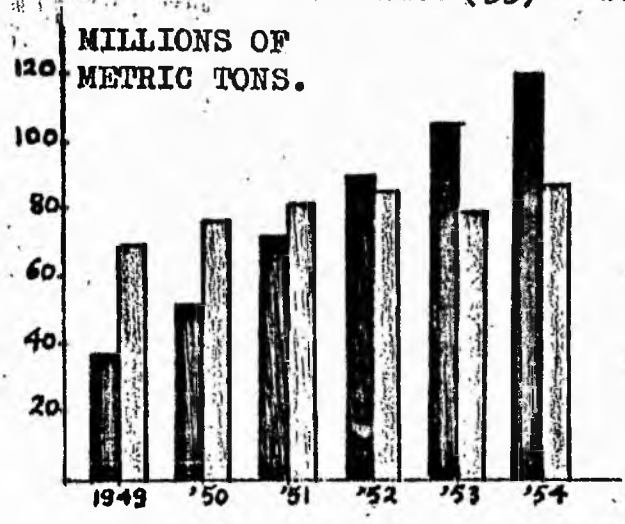
DIAGRAM (32)



MIDDLE EAST OIL PRODUCTION AS A PERCENTAGE OF WORLD TOTAL PRODUCTION

SOURCE: PIB MEMO., OIL IN THE MIDDLE EAST, FEB.1964.

DIAGRAM (33) WORLD CRUDE OIL EXPORTS.



FROM MIDDLE EAST

FROM REST OF NON-COMMUNIST WORLD.

SOURCE:
U.S BUREAU OF MINES.
(ALSO PETROLEUM PRESS SERVICE, OCT.1955)

For several well known reasons Western European countries were becoming increasingly dependent upon oil supply from the Middle East. In 1955 about 90% of their total oil imports came from that source. Britain's situation in this respect is shown in Table (19) where imports of oil from the Middle East are compared with her total oil imports.

That, however, did not constitute all the British interests in the Middle East oil. The richest oil fields of all turned out to lie in these tribal territories beside the Persian Gulf, control of which the British had taken on behalf of the Indian Empire during the 19th century. Besides, from the very beginning the role of British capital in the exploitation of Middle East oil was a dominating one. Without entering into many details, British political dominance in the area whether it was unofficially practised as the case with Persia, Iraq, or Saudi Arabia, or officially declared as the case with Kuwait, Bahrain and Qatar, decisively helped British capital to acquire a major share in the oil investments. Not only that, the British government also shared in the oil enterprise of the Middle East after 1914 by acquiring 51% of the Anglo-Persian Oil Company. The action was principally advocated by Winston Churchill, First Lord of Admiralty at that time, when navies were fast changing to liquid fuel. Later, that purchase of oil shares had

far-reaching political and economic consequences, particularly as the Middle East turned out to be one of the richest oil areas in the world, and also because the Anglo-Persian Company expanded its investment in several countries.

Britain's imports (4) from East of Suez increased from £149.7 million in 1913 to an annual average of £259.0 million in the years 1926-27-28 but decreased after that to an annual average of £241.5 million in the years 1936-37-38. The average of the post-war years 1946-47-4 8 was however much above that of the late 1930's, i.e., £415.3 millions, then imports continued to rise until they reached £1065.5 millions in 1955. British exports to East of Suez developed in a similar manner, i.e., showing a continuous increase throughout the period in terms of pounds sterling, except during the 1930's. They increased from £180.1 millions in 1913 to an annual average of £246.0 millions in 1926-27-28, and then went down to an annual average of £138.6 million in 1936-37-38. In the post-war period they developed from £356.8 million an annual average of 1946-47-48 to £925.1 millions in 1955.

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(4) Figures of imports and exports included re-exports; Sources, "Annual Statement of the Trade of the U.K. with Foreign Countries and British Countries" Compiled in the Statistical Office of the Customs and Excise Dept.

The low figures of the late 1930's were partly due to the general depression of trade in these years and partly due to the new value which the pound sterling took after the gold standard was abandoned in the early 1830's Also the rise in prices must be taken into account when considering the notable increase in the value of the trade during the post-war period.

The position of Britain's trade with East of Suez may be seen more clearly when compared with her total trade. Imports from the East which represented 19% of total imports in 1913, formed 21.2% and 26.0% of the total in the late 1920's (1926-27-28 av.) and in the late 1930's (1936-37-38 av.). Exports to the East which amounted to 28.4% of total exports in 1913, constituted 30.1% of the total in the late 1920's (1926-27-28 av.) and only 25.9% in the late 1930's (1936-37-38 av.). We can see therefore that while the level of imports from East of Suez in the late 1920's was higher than that of the late 1930's, the latter represented a higher proportion in British total imports. As we have seen above British imports from East of Suez increased in importance by almost 5% between the late 1920's and the late 1930's. The same situation was not true in the case of exports. The lower value of British exports to East of Suez during the late 1930's was actually accompanied by a decrease in the importance of this trade

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The percentage which imports from the East of Suez formed in total British imports in the years 1946-47-48 was lower than the corresponding percentage of the late 1930's, by about 2.8%. But apart from this situation there was a definite change in the importance of the Eastern trade in the post war period. By 1955 imports from East of Suez amounted to 27.5% of total British import trade, and that was higher than 1913 by 8.5%. Exports to East of Suez formed 30.6% of total exports, which was higher by 2.2% than the corresponding proportion of 1913, but only higher by .5% than the level of the late 1930's however.

Table (20) shows the development of British Eastern trade by value and Table (21) demonstrates this development in comparison with the development of British trade in general. It is evident from the information of these two Tables that trade with Empire countries, and later with Commonwealth countries, had played throughout the selected period the most important part in the Eastern trade. By 1955 British import trade with foreign countries in the East was still as small as it had been during the 19th century. The development of British exports to foreign countries East of Suez was relatively more important but nevertheless in relation to total British exports they were declining almost throughout the selected period. Thus, in 1955 out of 27.5%

British imports came from East of Suez 25.4% were from Empire or Commonwealth countries and out of 30.6% of British exports sold East of Suez only 3.6% went to foreign countries.

We will realize however, from Table (21) that the notable expansion in the share of Empire and Commonwealth countries was mainly due to the considerable development of British trade with Australia, and New Zealand, throughout the selected period and with Kuwait in the post-war period. Britain's imports from Australasia increased from 7.6% in 1913 to 11.5% in 1955 and of total imports in these two years. Imports from Kuwait increased from a negligible position in the pre-war period to 3.8% of total British imports in 1955. Thus, imports from Australasia and Kuwait together were responsible for an increase of 7.7% out of 8.5%, the percentage increase in the share of Eastern Empire and Commonwealth countries in total British imports during the period 1913-1955. On the other hand Australasia increased its share of British export trade from 7.8% in 1913 to 14.2% in 1955. Meanwhile the rest of the British dependencies and Commonwealth countries East of Suez decreased its share of British exports by 4.5%. A second glance at Table (21) will show that Britain's trade with Malaya, Ceylon and other minor dependencies in Asia or in the Eastern coast of Africa had been slowly developing up to the late 1930's, but since then they increased in

proportion to total British trade. The trade which had significantly changed in importance was that which was conducted with India. Generally speaking this trade was declining - as a percentage in total British trade almost throughout the selected period.

Had the British trade with the East all been carried through the Suez Canal, we would have simply and reasonably concluded that the importance of this waterway had fluctuated with the development of this trade and with the importance that it had assumed as a percentage in total trade. Yet that was not the situation. We shall see in the following sections of this Part that the trades which in particular showed a considerable growth, i.e., British trade with Australasia and British imports of oil from the Middle East, had often needed to make a choice between the services provided by the Suez Canal and those provided by other alternative routes.

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Table 19

British Imports of Petroleum and Petroleum Products 1951-55

	1951 £ Mil.	1952 £ Mil.	1953 £ Mil.	1954 £ Mil.	1955 £ Mil.
From East of Suez.					
(a) Middle East					
British Commonwealth					
Aden	.512	.041	.035	.259	2.948
Bahrain, Qatar, Trucial States	87.841	10.980	17.600	16.062	20.647
Kuwait		135.892	129.438	134.371	125.140
Total British Commonwealth	88.353	146.913	147.073	150.692	148.727
Foreign Countries					
Saudi Arabia	37.093	35.269	2.109	1.662	3.081
Iraq	5.432	41.015	56.433	42.344	30.824
Iran	26.983	-	-	.121	11.197
Total Foreign Countries	69.508	76.284	58.542	44.127	45.102
(a) Total Middle East	157.861	223.197	205.615	194.819	193.829
(b) Rest of East of Suez					
British Common - wealth	2.970	.794	.642	5.040	5.115
Foreign Countries	.953	.561	.305	1.240	.986
(b) Total Rest of East of Suez	3.923	1.355	.947	6.280	6.101
(c) From all other parts of world	145.095	110.987	103.423	110.893	134.413
Total Imports a + b + c	306.879	335.539	309.985	311.992	334.343

TABLE 20

U.K's Imports and Exports from East of Suez. In Millions of £ Sterling

	1913		Average 1926-27-28		Average 1936-37-38		Average 1946-47-48		1955	
	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.
British Countries of B. Commonw.										
Australia	38.1	37.8	56.061	61.814	68.336	36.733	111.130	91.030	263.900	286.437
N. Zealand	20.3	11.8	46.879	20.603	46.768	19.232	91.031	41.283	184.105	143.761
India (1)	48.4	71.7	62.630	84.864	57.307	37.068	90.444	95.610	186.642	168.063
Malaya (2)	19.4	7.4	20.118	15.076	10.760	10.495	29.533	29.238	85.174	74.539
H.Kong, Borneo & Others (3)	.7	4.6	.926	4.851	1.307	3.328	3.371	14.564	27.319	31.154
Ceylon	7.8	4.3	16.116	6.071	11.361	3.616	26.248	10.594	41.506	21.845
Aden (4)	.3	.5	.296	.602	.088	.536	.983	2.258	4.792	7.315
ON E. AFRICA										
Mauritius & Seychelles (5)	1.2	2.0	11.688	5.960	9.426	4.479	15.379	18.223	44.332	62.750
Kuwait, Bahrain & T. Oman	x	x	x	x	x	x	4.700[x]	5.956[x]	146.288	20.975
Total British Countries & Commonwealth	136.2	140.1	214.714	199.831	205.353	115.487	372.819	308.756	984.056	816.839
Foreign Countries	13.479	39.980	44.240	46.213	36.108	23.111	42.458	48.047	81.442	108.258
Total East of Suez	149.679	180.080	258.954	246.044	241.461	138.598	415.277	356.803	1065.500	925.097
Total U.K. Imports.	768.734	634.9	1218.433	818.146	931.695	543.393	1790.088	1269.860	3880.896	3024.332

Annual Trade Figures compiled from: Annual Statement of the Trade of the U.K. with Foreign Countries and British Countries (later and Commonwealth).

(1) India including Burma and Pakistan up to 1948. In the latter year Burma obtained independence and withdrew from the British Commonwealth and thus classified as a foreign country since then. For the purposes of this research the figure of India still included Pakistan in the post-war years.

(2) Malaya including what was known as Federated Malay States, Unfederated Malay States and the Straits Settlements.

(3) Hong Kong, Borneo, Brunei and Wei-Hai-Wei. The latter territory was ceded to China after 1928 and since then treated as a foreing country.

(4) Aden including Aden and Aden Protectorates.

(5) Including all trade from British countries or Protectorates on the Eastern Coast of Africa, mainly from Zanzibar, Sudan, Kenya and Tanganyika and Somaliland. This category also includes Mauritius and Seychelles.

(6) All figures of imports and exports are total imports and total exports, i.e. including re-exports.

x Kuwait, Bahrain and Trucial Oman, not specified as such before World War II

TABLE 21

U.K's Imports and Exports from East of Suez as Percentages in Total Import and Export Trades

	1913		Average 1926-27-28		Average 1936-37-38		Average 1946-47-48		1955	
	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.
British Countries & Commonwealth	17.2	22.1	17.6	24.4	22.1	21.6	20.8	24.3	25.4	27.0
Foreign Countries	1.8	6.3	3.6	5.7	3.9	4.3	2.4	3.8	2.1	3.6
Total Trade from East of Suez	19.0	28.4	21.2	30.1	26.0	25.9	23.2	28.1	27.5	30.6
*Principal Commonwealth countries										
Australia	4.96	5.95	4.60	7.55	7.33	6.75	6.21	7.17	6.80	9.47
New Zealand	2.64	1.86	3.85	2.51	5.02	3.53	5.08	3.25	4.74	4.76
Total Australasia	7.60	7.81	7.45	10.06	12.35	10.28	11.29	10.42	11.54	14.23
India	6.30	11.29	5.14	10.38	6.15	6.83	5.05	7.53	4.81	5.56
Malay	2.52	1.16	1.65	1.85	1.16	1.93	1.65	2.30	2.20	2.46
Kuwait, Bahrain & Trucial Oman	x	x	x	x	x	x	x	x	3.77	.69

Computations based on figures supplied in Table (20)

CHAPTER VI

FACTORS WHICH INFLUENCED THE DEPENDENCE OF BRITISH EASTERN TRADE ON THE SUEZ CANAL (1913-1955)

Factors which Influenced the Dependence of British Eastern Trade on the Suez Canal. 1913-1955

(a) The Opening of the Panama Canal:

In 1914 the Panama Canal was open for navigation. So far as the American trade in the East was concerned the new Canal was bound to give some considerable advantages over the Suez Canal or other alternative routes, yet for European-Eastern trade the situation was different.(1) Table (22) shows the relative advantages - in point of mileage - of the Suez Canal and Panama Canal for various journeys between London and several Eastern ports. London was still considerably nearer by Suez to Fremantle, Calcutta, Singapore, Manila and Hong Kong. On the other hand, Wellington (New Zealand) was nearer by Panama than by Suez. We can also see that the saving in distance via Suez over Panama in the journey London-Sydney was only 28 sea miles. Approximately, therefore, a hypothetical line in the Tasman sea, say 28 miles east of Sydney, and then across the Pacific would make a boundary between the zones of the Suez and the Panama Canals. Deciding only upon the basis of the geographical

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(1) See J.R.S.S. Vol. 76, 1912-1913 "The Panama Canal and International Trade Competition", by Prof. Hutchinson, L. Also Wilson, A. "The Suez Canal", Chapter X - The Panama Canal; A Rival Route. Also Christian Funck-Brentano, Canal du Suez, Chapter IV.

TABLE No. 22.

The Relative Advantages (in point of mileage) of the Suez Canal and the Panama Canal.

	Saving via Suez over Panama in Marine Miles	Saving via Panama over Suez
London to:		
Calcutta	9,310	--
Singapore	7,339	--
Fremantle	5,210	--
Shanghai	4,989	--
Hong Kong	4,729	--
Manila	4,700	--
Melbourne	1,803	--
Yokohama	1,748	--
Sydney	28	--
Wellington	--	1,077

distance and concerning ourselves with British ports, we should find that trade with any port that lay to the West of such a boundary and to the East of Suez would be carried via the Suez Canal, while trade with any port that lay to the East of this boundary and to the West of the American continent would be channeled by the Panama Canal.

Mere saving of distance will always be but one determinant in making the final choice of a trade route. Nevertheless, we may qualify this statement by adding that the greater saving in distance by the use of a particular route, the less significant would be the influence of other factors in making the final choice. On the basis of this general rule, competition between the Suez and the Panama Canals was unlikely in the cases of the British trade conducted with India, Malaya, Ceylon or Hong Kong, since the saving of distance by the use of the Suez route was obviously going to play a decisive role. British/New Zealand trade was more likely to be taken by the Panama Canal than by the Suez Canal. British trade with south west Australia was likely to continue by the Suez Canal or by the Cape of Good Hope as was the case before 1914. On the other hand, so much competition was to be expected in the areas which lay very near to the hypothetical border line by which we divided the respective zones of the Suez Canal and

of the Panama Canal. These areas were eastern Australia, north east Asia and all the Pacific Islands which were adjacent to our hypothetical line. Competition between the two Canals was going to be determined according to various factors of which the most important would be conditions of navigation, Canal dues, insurance rates, costs of bunkering fuel, the amount of intermediate freights and casual passengers picked up en route. If the relative advantages of the Suez and the Panama Canals were equal in terms of these factors the position of the "border line", which we drew on the basis of saving in distance alone, would remain unchanged. However, in any other case the hypothetical "border line" would tend to shift, either eastward or westward, and would thus redivide the trade between the two routes.

Yet, in practice, it should not be expected that whenever a shift in the "border line" took place traffic would be re-routed. It is possible that this situation might occur during periods of depression or when some new trade was still indifferent towards two, or three, alternative routes. But under normal circumstances any change in the relative advantages of alternative routes, unless fundamental, instead of being only temporary or a short-run change, would not cause any re-routing of the dependent trade. Trade routes were obviously not mere mathematical lines. They were usually established

over a long period of time and therefore the re-routing of the dependent trade would be very difficult to accomplish unless a strong reason existed for doing so.

Before the outbreak of the first world War, approximately 25% of the British outward traffic to Australia went by the Suez Canal while a much larger percentage, i.e., 75% went by the Cape route. In the homeward traffic from Australasia about 40% came by the Suez Canal while the remaining percentage was divided between the Cape of Good Hope, 32%, and the Cape Horn, 28%.(2) Roughly speaking, therefore, the largest percentage of British/Australasian trade was still dependent on routes other than the Suez route. We neglected this situation in the above discussion in order to concentrate and throw some light on the new competition between the Suez Canal and the Panama Canal. However, in a number of other pages in this Chapter

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(2) These figures are taken from an inquiry addressed in 1912 to the principal steamshipping firms in Britain owning vessels engaged in the Australian trade. They may be used to indicate the proportion of British/Australian trade which depended on the Canal, but as a sort of approximation only. Had the inquiry been addressed to owners of tramp steamers and sailing vessels besides steamshipping firms more reliance could have been placed on the figures. See The Dominions Royal Commission: Second Interim Report of the Royal Commission on the Natural Resources, Trade and Legislation of Certain Portions of His Majesty's Dominion, Appendix II, Command Paper No. 7210, 1914.

attention has been given to finding out the influence which the new competition of the Panama Canal and the old rivalry of the Cape route had on the flow of British/ Australasian traffic in the Suez Canal. This represents one of the important questions dealt with in this Part, not only because of the existence of many other alternative routes besides the Suez Canal but also because British trade with Australasia had in particular shown a considerable growth throughout the selected period.

(b) Wars and Political Troubles:

Due to its high strategical value the Suez Canal was subject to attack by armed troops or by naval and air forces during the two World Wars.(3) Besides, the particular nature of the two Wars, i.e., as mainly created and fought by European nations, led to the use of the Mediterranean sea as a battle field and thus drastically reduced its use for purposes of commerce. Under these circumstances the commercial value of the Suez Canal as a trade route was inevitably reduced to a minimum or even to nil during the active war years. Consequently, however small the trade conducted with the East had become during the war periods, the use of alternative sea routes other than the Suez Canal, was favoured.

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(3) Hallberg, C.W., The Suez Canal, London 1931, p.310-313 and 315-318, Schonfield, H.J. The Suez Canal in World Affairs, London 1952. Ch. VII, IX and XIII.

Total traffic in the Suez Canal decreased from 20.034 mil. S. tons to 9.352 mil. S. tons between 1913 and 1918.(4) In 1920 traffic went up again to 17.575 mil. S. tons but the proportion which warships occupied was still relatively very high. Out of Canal traffic in 1913 warships formed only 301. S. tons while in 1920 they amounted to 3.401 mil. S. tons. It was not until 1922 when total traffic had risen above the level of 1913 and warship traffic had much decreased in proportion.

During the period of the second World War the decrease in Canal traffic was more dramatic. From 34.418 mil. S. tons in 1938 it decreased to 7.028 mil. S. tons in 1942. Although Canal traffic increased steadily after that date and reached 25.065 mil. S. tons in 1945, it was obvious that a very high percentage still consisted of warships or ships carrying provisions to the fighting troops in Egypt and in other Middle East countries. It is known that the Panama Canal zone was not subject to any military operations during the first World War, nor was it disturbed by the Second War as much as the Suez Canal. Yet, there is no such evidence as to suggest that some British/Australasian traffic was re-routed to Panama instead of Suez during the war periods. In fact it is well known that the Cape route gained most of the traffic which abandoned the Suez Canal during these periods.

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(4) "S-ton" stands for Suez net ton, i.e., Suez Canal Company's measurement which is roughly equal 1.185 British net ton.

During the chosen period Canal traffic was also very sensitive to political troubles in the area. The first situation arose during the Italian campaign against Abyssinia when Mussolini made several attacks on the British policy in the Near East, especially in the context of the Suez Canal.(5) He claimed that the Canal dues were exorbitant and questioned the efficiency of the management. Italian warships in the Canal were increasing rapidly in number so that total warship traffic increased from 1.166 mil. S. tons in 1934 to 2.510 mil. S. tons in 1936. The situation became very alarming to the British and the question of blocking the Canal to Italian war vessels was seriously considered. Nevertheless the proposed action was never taken as the atmosphere grew quieter after victory was achieved by the Italians in their war against Abyssinia.

The critical situation that surrounded the Abyssinian campaign had considerably raised maritime insurance rates. For example in October 1935, 5/- per 100 lbs of merchandise was the insurance rate paid by vessels using the Suez route, while only 1/6d was the rate in the Cape route. In 1936 Suez Canal traffic was further hit by the Spanish Civil War which raised rates of insurance between Gibraltar and Malta dramatically so as to reach

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(5) Schonfield, H.J."Italy and the Suez" London, July 1940

something between 7/6d. and 20/-.[6] Canal traffic belonging to Britain and to countries on the Western coast of Europe was bound to be affected by such high rates of insurance. The share of Britain, France, the Netherlands, Norway and Sweden in total Canal traffic decreased from 65.9% in 1935 to 63.4% in 1936.[7] British share alone decreased by 1.5%.

In general in the period 1934-1936 Suez Canal statistics showed that merchandise traffic went down from 28.448 mil. tons to 25.556 mil. tons. British-Australasian traffic was especially sensitive to the changes in the all-over cost of using the Suez route and therefore a considerable percentage of this traffic was re-routed during the Abyssinian War and the Spanish Civil war to the Cape route and to the Panama Canal. Australasian trade in the Canal, which was principally conducted with Britain, decreased from 3.356 mil. S. tons in 1933 to 1.954 mil. S. tons in 1936. After that latter date it increased steadily until the Second War interrupted the course of trade in the Suez Canal.

Lastly, the political crisis caused by the nationalization of Anglo-Iranian Oil Company in 1951 and the

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(6) Compagnie Universelle du Canal du Suez, Collection Economie du Monde, Christian Funck-Bientane, Paris 1947, p.223.

(7) Annual Report of the Suez Canal Company, for figures see 1934, 1935 and 1936.

consequent intervention of the British government in the affairs of Iran, resulted in higher prices of bunkering oil fuel in the Suez route particularly in 1951 and 1952.(8) Again the most notable decrease was that in traffic belonging to Australia. Between 1951 and 1953 Australasian traffic (mainly Australian) decreased from 7.104 mil. S. tons to 6.193 mil. S. tons. At the same time under Europe/Australasia trade Panama Canal statistics recorded a considerable increase particularly during 1951-1952. Between these two years Europe/Australasia trade in Panama Canal increased from 1.842 mil. long tons to 2.904 mil. long tons, an increase of 57.7%,(9) which was never repeated in the following years until 1956.

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(8) See quotations of Fuel Prices given in Petroleum Press Service.

(9) The Report of Panama Canal Company for the respective years. "The cessation of mineral oil shipments from Iran resulted in a gain of an estimated 1.5 million net vessel tons of tankers traffic in 1952 and this was reflected principally in the east coast United States/Canada-Australasia trade....."Unsettled conditions in the Suez Canal area are assumed to have played an important part in re-routing of some traffic from Suez to Panama and to have accounted at least for the heavy increase in traffic in the Europe-Australasia trade". Report of the Panama Canal 1953.

(c) Technical Development in the Shipbuilding Industry, and Prices of Bunkering Fuel.

In Part I we realized that apart from the shortening of the distance, the Suez Canal route offered over the Cape route several other advantages to steamships. To sum up, these were better weather conditions, suitable navigable water, coaling stations at shorter intervals and cheaper bunkering coal.

However, from the early years of the 20th century onwards technical development in the shipbuilding industry and the change in prices of bunkering fuel available en route had significantly changed the relative advantages of the Suez route more than once.

To begin with, technical development in the shipbuilding industry was continuously reducing the importance of the facilities which the Suez route had given to the early steamers. Steamships evolved during the early 20th century needed smaller and smaller proportion of its total carrying capacity for bunkering fuel. They also were increasingly becoming suitable for navigation in all kinds of water and capable of encountering heavy seas and winds. In addition to this development, prices of the South African coal at Capetown were becoming lower than prices of British coal at Aden or at any other coaling station in the Suez route.

Thus while during the 19th century steamers could share in the Eastern trade only when operated on the Suez Canal route, they were now capable of making a choice between the Cape route and the Suez route according to other economic considerations. Payments of Canal dues plus the foregoing of the cheaper bunkering facilities at Capetown had to be balanced against the gain resulting from using the shorter route.

After the first World War the number of coal-burning steamers started to decline with the growth of the tonnage of oil burning steamers and motorships. Table (23) illustrates that significant feature of the development of the world merchant fleet. In 1914, 43,859,381 tons gross or 96.6% of world merchant marine consisted of coal-burning steamers while in 1939 this kind of vessel was reduced to 31,015,069 tons gross or 45.3% of world total. By 1954 coal-burning steamships had represented less than 11.5%.

A simultaneous development was that oil as ship fuel gained considerably in importance at the expense of coal, a movement which reached its peak just after the second world War. This was one of the main factors which enabled the Panama Canal to capture some of the Suez Canal traffic during the inter-war period. Oil fuel was available at Los Angeles and at other American ports at considerably lower prices than in any other place in the world. The Gulf coast of the U.S. was

TABLE 23.

World Merchant Fleet
Excluding Sailing Vessels

	Steamships		Motorships	Total
	Coal-burning	Oil-burning		
	tons	tons	tons	tons
1914	43,859,381	1,310,209	234,287	45,403,877
1920	40,358,396	19,420,895	6,628,102	66,407,393
1939	31,015,069	20,575,676	16,918,687	68,509,432
1949	17,413,643	45,805,553	19,351,719	82,570,915
1954	11,131,288	54,358,576	31,931,662	97,421,526

Source: Encyclopaedia Britannica,
Vol.20, 1964 Edition
(p. 556-557 Shipping Statist)

the main source of oil supply in the world and therefore independently formed its own price and imposed it, with a few exceptions, in every market. "..A buyer anywhere in the world"...wrote Professor W.A. Leeman in his book (10) "The Price of Middb East Oil"...paid the U.S. Gulf price plus freight from the Gulf even though the oil actually was delivered to him from a nearer field. From the U.S. Gulf Coast the price rose with distance over the entire international market".. Thus although the Persian Gulf oil industry was rapidly developing during the inter-war period bunkering fuel was sold in the Suez route as if it had come originally from the U.S. Gulf Coast. For the same reason fuel oil was available at many of the ports of the Cape route cheaper than in the Suez route, which also was detrimental to the Suez Canal traffic - the Australasian section.

During and after the Second World War the Middle East oil industry expanded dramatically, assumed a serious position in world oil trade and began to develop its own price structure. The immediate benefit of the independence of the Middle East fuel prices was roughly equal to £1.90 per barrel which represented

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(10) The Price of Middle East Oil, Cornell University Press 1962, Quotation, p.89.

the costs of transportation from the U.S. Gulf Coast to the Persian Gulf.(11) Such gain was indeed significant to the Suez route. Prices of bunkering fuel at Aden continued throughout the post-war period to be very favourable and the Suez Canal was consequently attracting back traffic lost in the pre-war period to the Cape route and Panama route. In Table (24) prices of bunkering fuel at Aden were quoted at various dates and compared with those available at other ports in the Panama and the Cape routes.

(d) The Policy of the Suez Canal Company.

Attention may be given here to two principal aspects of the Canal Company's policy and to the respective influence of each on the traffic during the period 1913-1955. These are, first, the policy which the company carried towards maintaining and improving the capacity of the Suez Canal, and secondly transit dues policy.

First: Improvement Projects and Influence Upon Traffic

The necessity of maintaining and improving the dimensions of the Suez Canal was explained in some detail in Chapter III, Part I. In brief, it was

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(11) Price of Middle East Oil, W.A. Leeman, p.92.

TABLE (24)

BUNKERING FUEL PRICE AT VARIOUS SELECTED PORTS - Prices Shillings per Long Ton

	15/12/1953		15/6/1954		12/12/1954		14/6/55		13/12/1955	
	Fuel Oil	Diesel Oil	Fuel Oil	Diesel Oil	Fuel Oil	Diesel Oil	Fuel Oil	Diesel Oil	Fuel Oil	Diesel Oil
New York (1)	119/7	219/6	119/7	206/9	125/10	230/4	125/8	207/7	141/2	212/7
Curacao (1)	103/8	180/8	103/8	175/4	104/5	190/2	109/2	185/9	117/3	191/10
Port Said	141/-	220/-	141/-	217/-	141/-	225/6	146/-	226/6	153/6	234/-
Las Palmas	136/-	215/-	136/-	212/-	136/-	220/6	141/-	221/6	148/6	229/-
Cape Town	172/6	250/6	166/6	241/6	166/6	250/-	166/6	246/-	174/-	253/6
Colombo	148/6	226/6	142/-	217/-	142/-	225/6	147/-	226/6	154/6	234/-
Aden	134/-	213/-	134/-	210/-	134/-	218/-	139/-	219/6	146/6	227/-
Fremantle	172/6	250/6	166/6	241/6	166/6	250/-	166/6	246/-	174/-	253/6

Sources: Petroleum Press Service, Vols. 21, 22, 23, of 1953, 1954 and 1955.

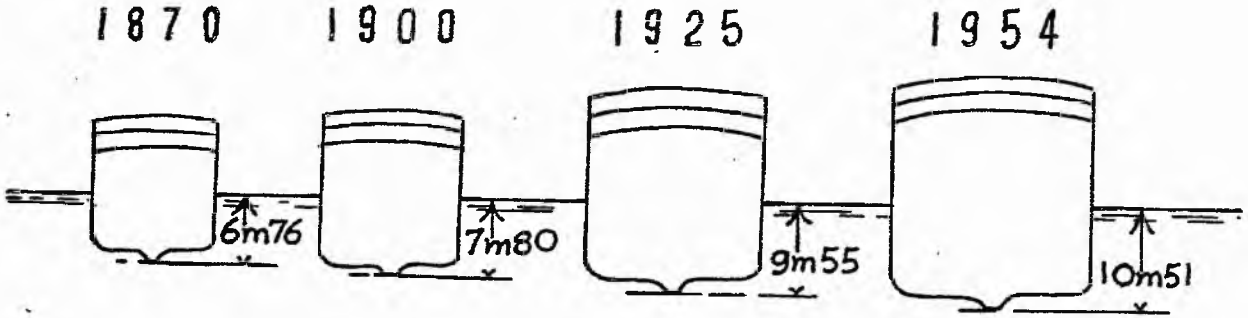
(1) Prices of bunkering fuel at Western Hemisphere Ports were given in $ per barrel. These were exchanged into shillings per long ton at rates of exchanges quoted from the Economist in the specific dates given in the Table, and 7.472 barrels = 1 Long Ton.

the need to maintain continually the capacity of the existing Canal and further to improve its dimensions to accommodate the increase in the size of the commercial vessel and the growing needs of commerce in such a way that the waterway would always be in a condition to give satisfaction to its clients. The amount of excavation and dredging this needed during the period 1914-1954 amounted to about 205 mil. cubic metres. That was roughly 2.8 times the volume excavated during the original construction work and more than the amount dredged during the forty five years 1870-1914 by about 20 mil. cubic metres. See also Diagram (1). Consequently it was possible to increase the authorised maximum draught of ships using the Canal from 8.53 metres in 1913 to 10.16 metres in 1930 and then to about 10.60 metres in 1954. Graph (34) demonstrates maximum draught of ships which passed through the Canal in some selected years in the period 1870-1954. The average gross tonnage of the vessels using the Suez Canal increased from 5,455 in 1913, to 7,376 in 1929, to 7,812 in 1939 and then to 10.542 in 1955. Besides, the average daily number of ships using the Canal increased from 11 ships in 1910-19 to 14 ships in 1920-29, to 16 ships in 1930-39 and lastly to 40 ships in 1955.

GRAPH(34) :

MAXIMUM DRAUGHT OF SHIPS WHICH PASSED THROUGH THE SUEZ CANAL

(source : Suez Canal Report,1955)



It remains for us now to see whether or not these improvements had sufficiently satisfied the requirements of the Canal users. Concerning ourselves with British users we may make a comparison between the average size of the commercial ship in the British fleet and the average size of the ship which the Suez Canal was able to channel. On the basis of the number and the gross tons of all merchant vessels of 500 gross tons and over, the average size of the commercial vessel in Britain's merchant fleet was 4,381 gross tons in 1939 and 5,453 gross tons in 1955. Meanwhile the average gross tonnage of the vessels using the Suez Canal was, as previously mentioned, 7,812 gross tons in 1939 and 10,542 gross tons in 1955. Considering only the category of vessels of 10,000 gross tons and over, the average size of the largest vessel in the British merchant fleet was 11,560 gross tons in 1939 and 11,938 gross tons in 1955. Again the capacity of the Canal, if measured in such a way, was clearly quite sufficient. The average gross tonnage of the largest ship which used the Canal in 1939 was 42,556 gross tons and in 1955 it was 32,181 gross tons. Besides, ships of 10,000 gross tons and over represented 14.2% and 51.9% of total number of vessels using the Canal in 1939 and 1955 respectively while this category represented only 2.9% and 11.0% in

total British merchant fleet of 500 gross tons and over.(12)

However, taking the basis of the time required for passing through the Suez Canal we would find that the services performed by this waterway during the post-war period were not so satisfactory as they had been in the pre-war period. The number of hours spent in traversing the Canal decreased from 16 hours 19 minutes in 1913 to 14 hours 57 minutes in 1929 and then further down to 12 hours 58 minutes in 1939. In the post-war period such an average was rising continuously and in 1955 it became 15 hours 17 minutes.

The considerable rise in oil trade and Australian trade in the Canal in the post-war period resulted in a notable increase in the average daily number of vessels using the Canal. Obviously that was not quite expected by the Canal Company and was not therefore well prepared for in terms of a larger width of the channel throughout its course. Thus when it happened it was necessarily going to slow down the movement of the Canal traffic. At this point we might go back again to the pre-war

(12) Figures concerning U.K's merchant fleet are obtained from "Annual Abstract of Statistics" published by the Central Statistical Office, London. All other figures are compiled from Statistical tables published by the Suez Canal Company.

period and wonder whether the Suez Canal would have functioned satisfactorily if the period of the 1930's had been a prosperous period rather than one in which the course of trade was so much interrupted and depressed. Nevertheless, the delay in traffic in the post-war period was not considerable and on the basis of the available information it did not impair the business of the Suez Canal.

Canal Dues:

In Part 1, Chapter 3, we suggested that the Suez Canal dues would always have to be reduced because of two factors; technical development in shipbuilding and the existence of other alternative sea routes. Technical development, if we may recall, by increasing the speed of the ship and by reducing its operating costs, curtails, although very slowly, the relative advantages of the shorter sea route and increases the burden of the dues which should be paid for its usage. This analysis, however, applies to the Canal dues as measured in real terms in relation to other variables such as prices and freight rates. In other words, an increase in Canal dues would not be burdensome if freight rates or merchandise prices were rising faster. Similarly a reduction in Canal dues need not always indicate a reduction in their burden. Besides, it will be

necessary sometimes to measure the changes in the Suez Canal dues against the dues of the Panama Canal.(13)

The Suez Canal dues were assessed in terms of gold francs during the period 1913-1935 and then in Egyptian currency from 1935 onwards. Apart from the War periods, it appears clearly from Diagram (35) that these dues were successively reduced throughout the period 1913-1935. The conversion of the Suez dues in terms of British currency is however necessary. It would enable us to form a clearer idea about the significance of these dues from the side of the British users. It is also important to establish a concrete series of the changes in the dues in terms of one currency, instead of two currencies, throughout the selected period.

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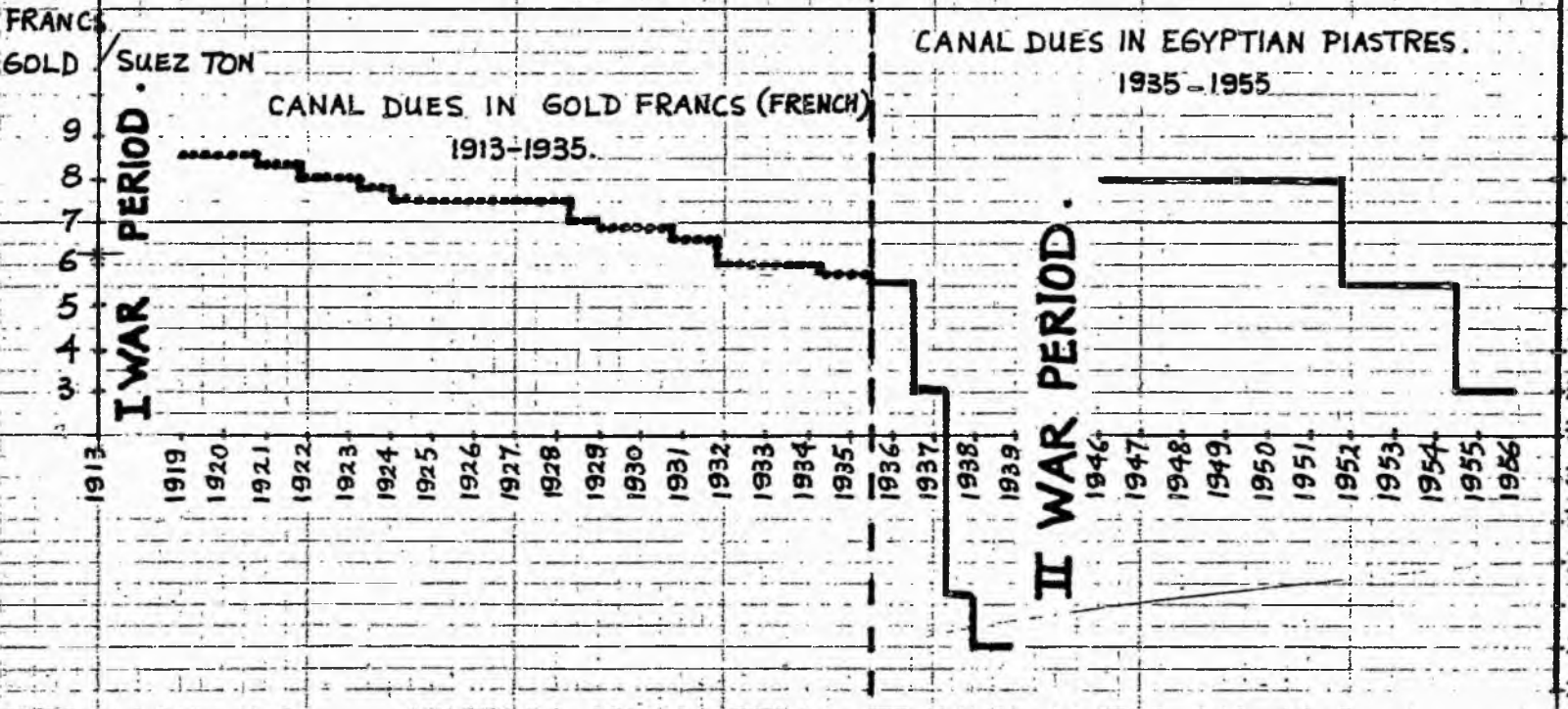
(13) A proper comparison between the Panama Canal dues and the Suez dues is hindered by several factors which are explained at the end of this section and also by the lack of detailed statistical statements (similar to those which were prepared and published by the Suez Canal) about ships which used the Panama Canal. The first annual report of the Panama Canal was published in 1952. Historical data for the period 1915-1952 have been supplied to me - on - request - by the Administration of the Panama Canal.

DIAGRAM (35).

THE SUEZ CANAL DUES FOR
SHIPS USING THE CANAL IN CARGO.



In terms of shillings - See Table (25) - it appears that the Suez Canal dues were not falling continuously throughout the period, as it seemed at first, when we observed them in terms of gold francs and Egyptian Piastres. The rate of dues increased in 1927 and also between 1931 and 1937 - See also Diagram 36 - besides, the increase during the two periods of World Wars. To obtain a clearer view about the situation the percentage changes in the dues have been calculated on the basis of 1928 = 100. Computations were made firstly on the basis of the currencies used by the Suez Canal Company, i.e., French gold francs and Egyptian piastres, and secondly, on the basis of sterling. The two sets of figures are shown together in Diagram (37). It is quite evident that there was a much greater rise in dues between 1913 and 1920 when payments were made in sterling rather than gold francs. The rate of exchange used for 1913 was the old par value of £1 = 25.225 francs gold; but in 1920 £1 was only equal to 18.11 francs gold. In the years 1920-29 the rate of exchange between the sterling and the gold francs was generally speaking, changing in favour of the pound sterling. Consequently, Canal dues were declining faster when paid in sterling; this was to the benefit of the British users. From 1929 to 1935

SUEZ CANAL DUES

DIAGRAM (36).

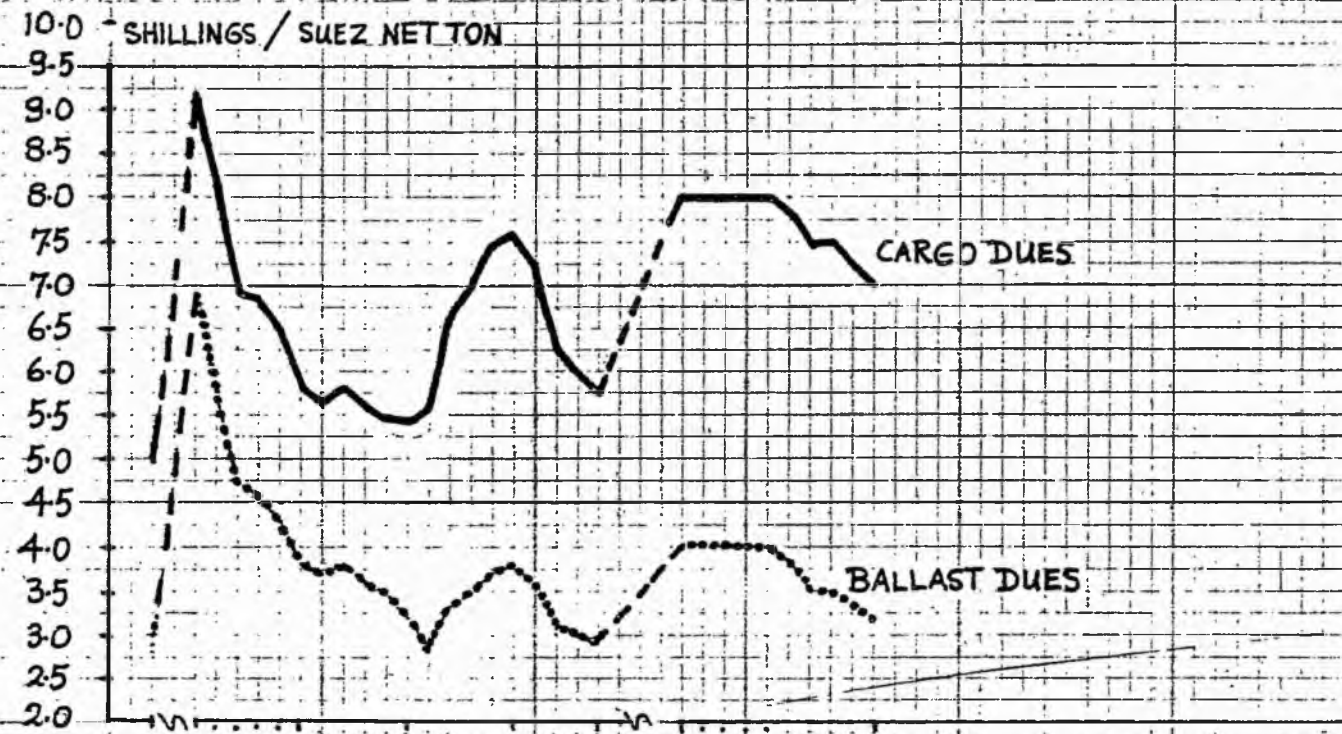
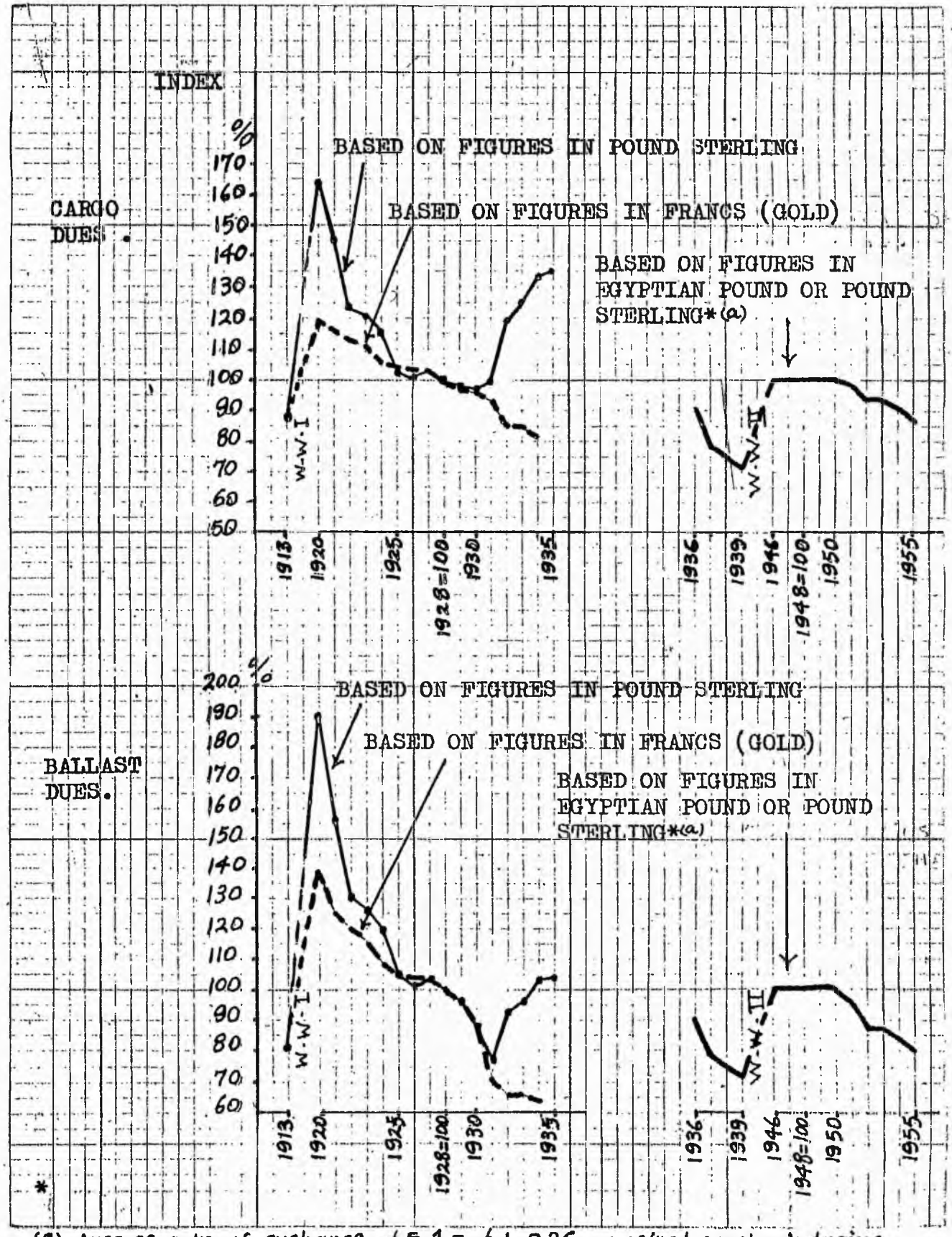


DIAGRAM (37).

PERCENTAGE CHANGE IN SUEZ CANAL DUES.



(a) Average rate of exchange £E 1 = £ 1·026 remained constant during the period 1936 – 1955.

TABLE (25)

SUEZ CANAL DUES PER NET TON (CANAL MEASUREMENT) IN CARGO

Year	Dues in Gold Franc	% Change 1928=100	Dues* in £ Sterling	% Change 1928=100	% Change 1948=100	Dues* in Shillings
1913	6.25	88	.2478	88		4.956
1920	8.44	119	.4595	164		9.190
1921	8.19	116	.4082	146		8.164
1922	8.00	113	.3452	123		6.904
1923	7.79	111	.3383	121		6.766
1924	7.50	106	.3244	116		6.488
1925	7.31	104	.2885	103		5.770
1926	7.25	103	.2821	101		5.646
1927	7.25	103	.2881	103		5.762
1928	7.06	100	.2805	100		5.610
1929	6.90	97	.2740	98		5.480
1930	6.82	96	.2717	97		5.434
1931	6.57	93	.2801	100		5.602
1932	6.00	85	.3322	118		6.644
1933	6.00	85	.3493	125		6.986
1934	5.81	82	.3730	133		7.460
1935*	5.75	*	.3782	135		7.564
	Dues in £ Egypt.	% Change 1948=100				
1935*	.3751	*				
1936	.35343	91	.3626	129	91	7.252
1937	.30469	78	.3126	112	78	6.252
1938	.29250	75	.3001	107	75	6.002
1939	.28030	72	.2876	103	72	5.752
1946	.39000	100	.4001	143	100	8.002
1947	.39000	100	.4001	143	100	8.002
1948	.39000	100	.4001	143	100	8.002
1949	.39000	100	.4001	143	100	8.002
1950	.39000	100	.4001	143	100	8.002
1951	.38271	98	.3927	141	98	7.854
1952	.36500	94	.3745	134	94	7.490
1953	.36500	94	.3745	134	94	7.490
1954	.35354	91	.3627	129	91	7.254
1955	.34000	87	.3488	125	87	6.976

TABLE (25) (contd.)

SUEZ CANAL DUES PER NET TON (CANAL MEASUREMENT) IN BALLAST

Year	Dues in Gold Francs	% Change 128=100	Dues * in £ Sterling	% Change 1928=100	% Change 1948=100	Dues * in Shillings
1913	3.75	82	.1487	82		2.974
1920	6.35	139	.3457	191		6.914
1921	5.69	125	.2836	157		5.672
1922	5.50	120	.2373	131		4.746
1923	5.29	116	.2297	127		4.594
1924	5.00	109	.2163	120		4.326
1925	4.81	105	.1898	105		3.796
1926	4.75	104	.1850	102		3.700
1927	4.75	104	.1887	104		3.774
1928	4.56	100	.1812	100		3.624
1929	4.40	96	.1747	96		3.494
1930	4.04	89	.1609	89		3.218
1931	3.28	72	.1398	77		2.796
1932	3.00	66	.1661	92		3.322
1933	3.00	66	.1747	96		3.494
1934	2.91	64	.1868	103		3.736
1935	2.88					
	Dues in £ Egypt.	% Change 1948=100	.1891	104		3.782
1935	.1828	*				
1936	.1767	91	.1813	100	91	3.626
1937	.1523	78	.1563	86	78	3.126
1938	.1463	75	.1501	83	75	3.002
1939	.1402	72	.1438	80	72	2.876
1946	.1950	100	.2001	111	100	4.002
1947	.1950	100	.2001	111	100	4.002
1948	.1950	100	.2001	111	100	4.002
1949	.1950	100	.2001	111	100	4.002
1950	.1950	100	.2001	111	100	4.002
1951	.1877	96	.1926	107	96	3.852
1952	.1700	87	.1744	96	87	3.488
1953	.1700	87	.1744	96	87	3.488
1954	.1631	84	.1674	93	84	3.348
1955	.1550	80	.1590	88	80	3.180

but particularly from 1931, we get a completely different situation. Britain abandoned the gold standard in 1931, and throughout the early 1930's the gold value of the pound sterling was falling at a considerable rate. Thus, until the Suez Canal Company left the gold standard in July 1935, the dues as estimated in terms of British currency were sharply rising to the detriment of the British users. Taking 1928 as equal to 100 we find that Canal dues for ships in cargo between 1928 and 1934 decreased by 18% when assessed by the company in terms of gold francs, but these increased by 33% when converted into sterling.

We now come to the next question, that of estimating the effectiveness of the dues on the development of merchandise traffic in the Canal. We can not, however, rely directly and simply upon these figures which we obtained above and which distinguished between cargo and ballast dues. The critical question is how much was the "ballast surcharge" paid for each ton of merchandise. As they appeared, ballast dues per S. ton (i.e. net ton, Suez Canal measurement) did not seem of much significance but in actual fact they played an

important role in determining the "actual rate of dues"(14) Ballast proportion in total merchandise traffic grew from 5.8% in 1913 to 22.3% and 34.8% in 1933 and 1948 respectively. Table (26) demonstrates the growth of ballast tonnage in total Canal traffic of merchandise. The Table distinguishes between tankers and dry cargo vessels (i.e., vessels not carrying oil) which traversed the Canal in ballast. It is evident that the growth in ballast proportion was principally due to the extraordinary growth of traffic of tankers. To explain this situation we would refer to the unbalanced development of South-North and North-South oil traffic in the Canal. In 1913 510,000 tons of mineral oil travelled in the Canal from North to South mainly from U.S.A. and Russia to India, Manchuria and some other places in the Far East. Meanwhile in the same year about 300,000 tons

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(14) I call it the "actual rate of dues" in distinction from the official rate of dues which the Suez Canal imposed on shipping in cargo or shipping in ballast. The "actual rate of dues" combines together official cargo and ballast dues, and is not only affected by changes in the official dues but it also reflects actual changes in costs of using the Suez Canal according to conditions of trade. Explanation in detail is given in the following pages.

TABLE (26)

BALLAST PROFORTION IN TRAFFIC

A. - Merchandise Traffic in the Suez Canal (excluding oil and and Mail Traffic).

Year.	(1) Merchant Ships in Cargo Net Tons	(2) Merchant Ships in Ballast Net Tons	(3) 1+2 Total Merchant Ships Net Tons	2/3 Percentage of Ballast %
1913*				
1920	9.566	1.027	10.593	9.7
1921	10.822	.413	11.235	3.7
1922	12.899	.072	12.971	0.6
1923	13.652	.739	14.391	5.1
1924	13.635	.882	14.517	6.1
1925	13.747	.782	14.529	5.4
1926	12.723	.021	12.744	0.2
1927	14.397	.406	14.803	2.7
1928	15.728	.680	16.408	4.1
1929	16.991	.223	17.214	1.3
1930	14.105	.055	14.160	0.4
1931	12.117	.496	12.613	3.9
1932	10.902	.839	11.741	7.1
1933	11.197	1.363	12.560	10.9
1934	12.089	1.366	13.455	10.2
1935	11.880	2.637	14.517	18.2
1936	11.073	2.878	13.951	20.6
1937	13.355	2.576	15.931	16.2
1938	12.322	2.369	14.691	16.1
1939	10.087	1.541	11.628	13.3
1946	12.668	1.481	14.149	10.5
1947	13.861	.877	14.738	6.0
1948	16.365	1.070	17.435	6.1
1949	20.426	1.878	22.304	8.4
1950	19.982	.928	20.910	4.4
1951	21.259	1.250	22.509	5.6
1952	20.295	1.433	21.728	6.6
1953	20.972	.820	21.792	3.8
1954	23.264	.900	24.164	3.7
1955	26.359	1.028	27.387	3.8

* 1913 All Merchandise oil included

Ballast proportion $\frac{.868}{13.980} = 6.2\%$

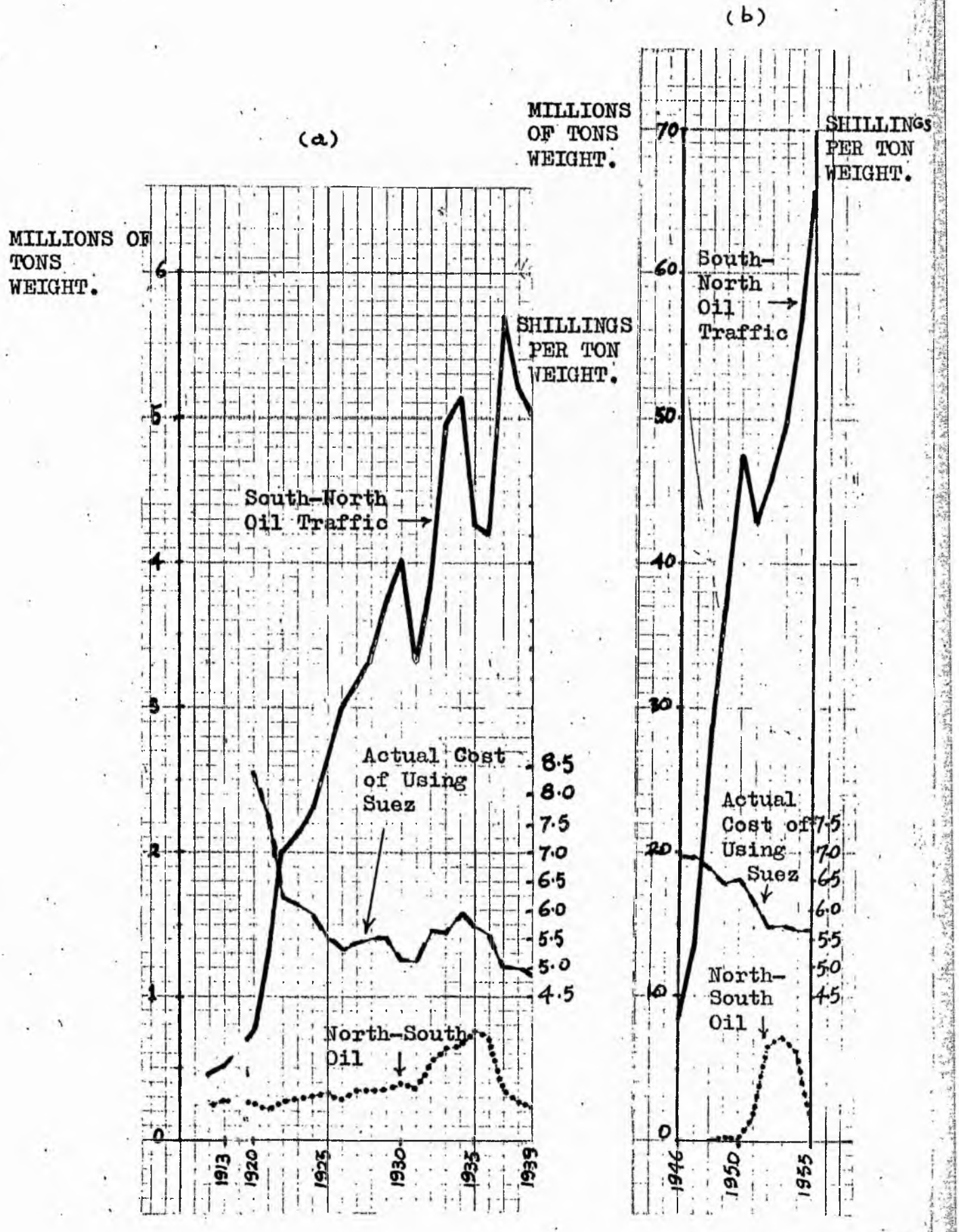
TABLE (26) (contd.)

B. - Oil Traffic in the Suez Canal.

Year	1 Tankers Transited in Cargo	2 Tankers Transited in Ballast	3 Total Tankers 1+2	2/3 Proportion of Ballast %
1913[x]				
1920	.670	.379	1.049	36.1
1921	.922	.754	1.676	45.0
1922	1.349	1.021	1.370	74.5
1923	1.393	1.174	2.567	45.7
1924	1.505	1.327	2.832	46.9
1925	1.774	1.648	3.422	48.2
1926	1.962	1.748	3.710	47.1
1927	2.102	1.817	3.919	46.4
1928	2.265	2.086	4.351	47.9
1929	2.574	2.364	4.938	47.9
1930	2.711	2.507	5.218	48.0
1931	2.153	2.409	4.562	52.8
1932	2.481	2.426	4.907	49.4
1933	3.120	2.735	5.855	46.7
1934	3.187	2.758	5.945	46.4
1935	2.792	2.068	4.860	42.6
1936	2.665	2.305	4.970	46.4
1937	3.357	3.034	6.391	47.5
1938	3.095	2.879	5.974	48.2
1939	2.984	2.869	5.853	49.0
1946	4.769	5.150	9.919	51.9
1947	7.890	8.179	16.069	50.9
1948	16.071	16.208	32.279	50.2
1949	20.105	20.090	40.195	50.0
1950	25.660	26.432	52.092	50.7
1951	24.405	22.327	46.732	47.8
1952	49.129	22.988	72.117	31.9
1953	52.221	25.125	77.346	32.5
1954	58.062	30.214	88.276	34.2
1955	64.324	37.891	102.215	37.1

of oil travelled in the South-North direction. During the years after 1913, but particularly during the post-Second War period, following the discoveries of rich oil-fields in the Middle East, South-North oil traffic was becoming increasingly larger and larger than that from North to South. See Diagram (38). As oil had to be carried in a special class of vessel, viz., tankers, such an increasing gap between oil traffic carried in both directions meant an increase in tonnage carried in ballast in the Southward journey. In fact, tankers travelling the Canal in that direction frequently had to make their passage fully in ballast. Thus in the case of oil "ballast surcharge" formed an important element in determining the "actual rate of dues". Leaving oil aside we find that the "ballast surcharge" which was normally paid for other sorts of merchandise over the basic cargo dues was quite small. Yet we need to draw attention here to the fluctuations of ballast tonnage with the conditions of trade. To give an example: during the 1930's when trade and freight businesses were generally depressed, ballast proportion in total merchandise traffic in the Canal considerably increased. This trend is best observed by following the escalations in the ballast proportion in dry cargo

DIAGRAM (38).

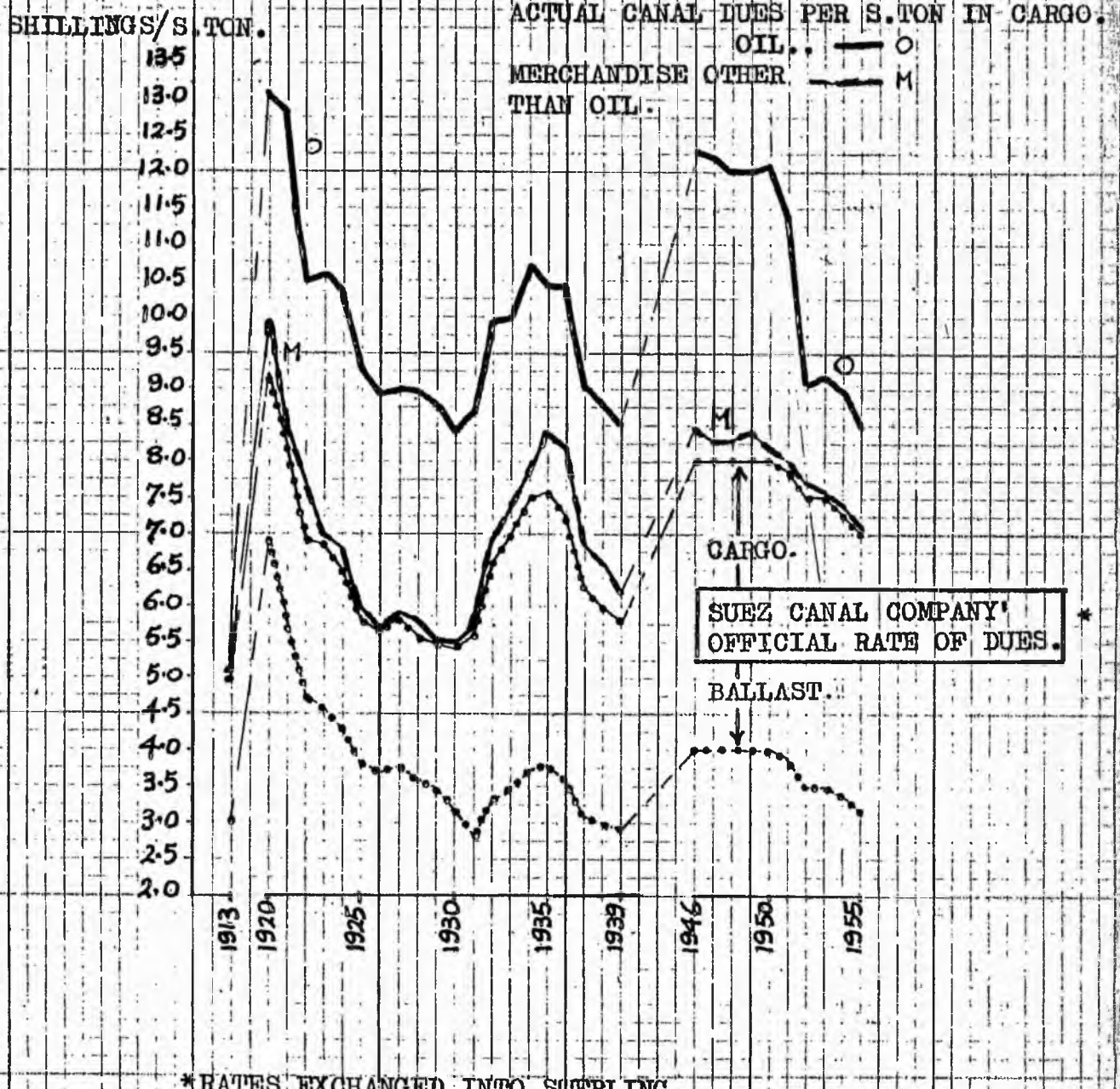

(a)
MILLIONS OF TONS WEIGHT.
SHILLINGS PER TON WEIGHT.
South-North Oil Traffic →
Actual Cost of Using Suez
North-South Oil
1913
1920
1925
1930
1935
1939
(b)
MILLIONS OF TONS WEIGHT.
SHILLINGS PER TON WEIGHT.
South-North Oil Traffic →
Actual Cost of Using Suez
North-South Oil
1946
1950
1955

traffic in the Canal - See Table (26) - The ballast proportion was normally very low and was considerably decreased when trade prospered, and vice versa.

Hence ballast dues were significant in spite of their smallness, since in the first place they played an important part in determining the actual cost of transporting oil through the Canal, and secondly because their burden greatly increased at periods when freight earnings and trade profits were depressed. To find out the amount of "ballast surcharge" per S. ton in cargo, total dues paid by merchant ships which used the Canal in ballast have been computed for each year during the selected period and then charged against total tonnage of merchant ships which used the Canal in cargo. A distinction is made in these calculations between tankers and dry cargo vessels and the results are given in Table (27). "Ballast surcharge" per S. ton in cargo had in the case of oil clearly differed substantially from other sorts of merchandise and had also varied from year to year according to conditions of trade.

The "actual rate of dues" per S. ton in cargo can now be obtained by adding the "ballast surcharge" as computed above to the amount of dues which the Canal Company charged per S. ton in cargo. In Diagram (39) we can compare this "actual rate of dues" with the Suez Canal dues. Apparently oil paid on the average

DIAGRAM (39).



*RATES EXCHANGED INTO STERLING.

TABLE (27)

ACTUAL DUES PER S. TON IN CARGO 1913-1955. I. - Oil Tankers

	Year	(a) Suez Canal Dues per S. Ton in Cargo	(b) Ballast Surcharge per S. Ton in Cargo	(a+b) Actual Dues per S. Ton in Cargo	% Change 1928=100
		Shillings	Shillings	Shillings	
	1913	4.956	.184	5.140	57.5
W.W.I	1920	9.190	3.914	13.104	146.5
	1921	8.164	4.638	12.802	143.1
	1922	6.904	3.592	10.496	117.3
	1923	6.766	3.872	10.638	118.9
	1924	6.488	3.814	10.302	115.2
	1925	5.770	3.526	9.296	103.9
	1926	5.646	3.296	8.942	100.0
	1927	5.762	3.262	9.024	100.9
	1928	5.610	3.336	8.946	100.0
	1929	5.480	3.210	8.690	97.1
	1930	5.434	2,976	8.410	94.0
	1931	5.602	3.130	8.732	97.6
	1932	6.644	3.248	9.892	110.6
	1933	6.986	3.062	10.048	112.3
	1934	7.460	3,234	10.694	119.5
	1935	7.564	2.802	10.366	115.9
	1936	7.252	3.136	10.388	116.1
	1937	6.252	2.826	9.078	101.5
	1938	6.002	2.792	8.794	98.3
	1939	5.752	2.764	8.516	95.2
W.W. II	1946	8.002	4.320	12.322	137.7
	1947	8.002	4.148	12.150	135.8
	1948	8.002	4.036	12.038	134.6
	1949	8.002	3.998	12.000	134.1
	1950	8.002	4.122	12.124	135.5
	1951	7.854	3.524	11.378	127.2
	1952	7.490	1.632	9.122	102.0
	1953	7.490	1.678	9.168	102.5
	1954	7.254	1.742	8.996	100.6
	1955	6.976	1.874	8.850	98.9

TABLE (27) (contd.)

ACTUAL DUES PER S. TON IN CARGO. 1913-1955 II. - Dry Cargo Vessels

Year	(a) Suez Canal Dues per S. Ton in Cargo	(b) Ballast Surcharge per S. Ton in Cargo	(a+b) Actual Dues per S. Ton in Cargo	% Change 1928=100
	Shillings	Shillings	Shillings	
1913	4.956	.184	5.140	89.1
1920	9.190	.742	9.932	172.3
1921	8.164	.216	8.380	145.3
1922	6.904	.026	6.930	120.2
1923	6.766	.248	7.014	121.6
1924	6.488	.280	6.768	117.4
1925	5.770	.216	5.986	103.8
1926	5.646	.006	5.652	98.0
1927	5.762	.106	5.868	101.8
1928	5.610	.156	5.766	100.0
1929	5.480	.046	5.526	95.8
1930	5.434	.012	5.446	94.5
1931	5.602	.114	5.716	99.1
1932	6.644	.256	6.900	119.7
1933	6.986	.426	7.412	128.6
1934	7.460	.422	7.882	136.7
1935	7.564	.840	8.404	145.8
1936	7.252	.942	8.194	142.1
1937	6.252	.604	6.856	118.9
1938	6.002	.578	6.580	114.1
1939	5.752	.440	6.192	107.4
1946	8.002	.468	8.470	146.9
1947	8.002	.254	8.256	143.2
1948	8.002	.262	8.264	143.3
1949	8.002	.366	8.368	145.1
1950	8.002	.186	8.188	142.0
1951	7.854	.226	8.080	140.1
1952	7.490	.246	7.736	134.2
1953	7.490	.136	7.626	132.3
1954	7.254	.130	7.384	128.1
1955	6.976	.124	7.100	123.1

something like 3 to 4 shillings per S. ton more than other sorts of merchandise. The period of the severe depression in the early 1930's may be taken for comparison, to show how the ballast dues, although small and declining, had significantly enlarged the "actual rate of dues". On the other hand we can see that, although both cargo and ballast dues were kept constant in 1946-1950, the "actual rate of dues" was steadily declining because of the fall in the ballast surcharge, due to the post-war boom. The "actual rate of dues" for oil declined considerably in 1951-52 following the oil crisis in Iran and the consequent increase of oil shipments to East of Suez, which simultaneously reduced the amount of tanker tonnage carried in ballast.

The "actual rate of dues" has been calculated per S. ton which is roughly equal to 1.185 British net ton. "Actual rate of dues" per ton weight will vary considerably from article to article as the required stowage space differs from one case to another. A ton weight of Australian wheat needs between 50 to 55 cubic feet, while a ton of Australian wool required a stowage space of 240 cubic feet. Hence "actual rate of dues" per ton weight of wool is bound to be more than 4 times that paid for a ton weight of wheat. Table (28) shows the average stowage space required for some selected

commodities.

TABLE (23)

Commodity	Stowage per ton weight	Commodity	Stowage per ton weight
Australian Butter	52-55	Rails	12-18
"Frozen Beef	95-98	Cotton Goods	80-84
Oil Seeds	58-75	Woollen Goods	80-84
Jute	60-64	Text.Machinery	100-120
Copra	80-120		

Reference: A.T. Wilson, The Suez Canal, p.128

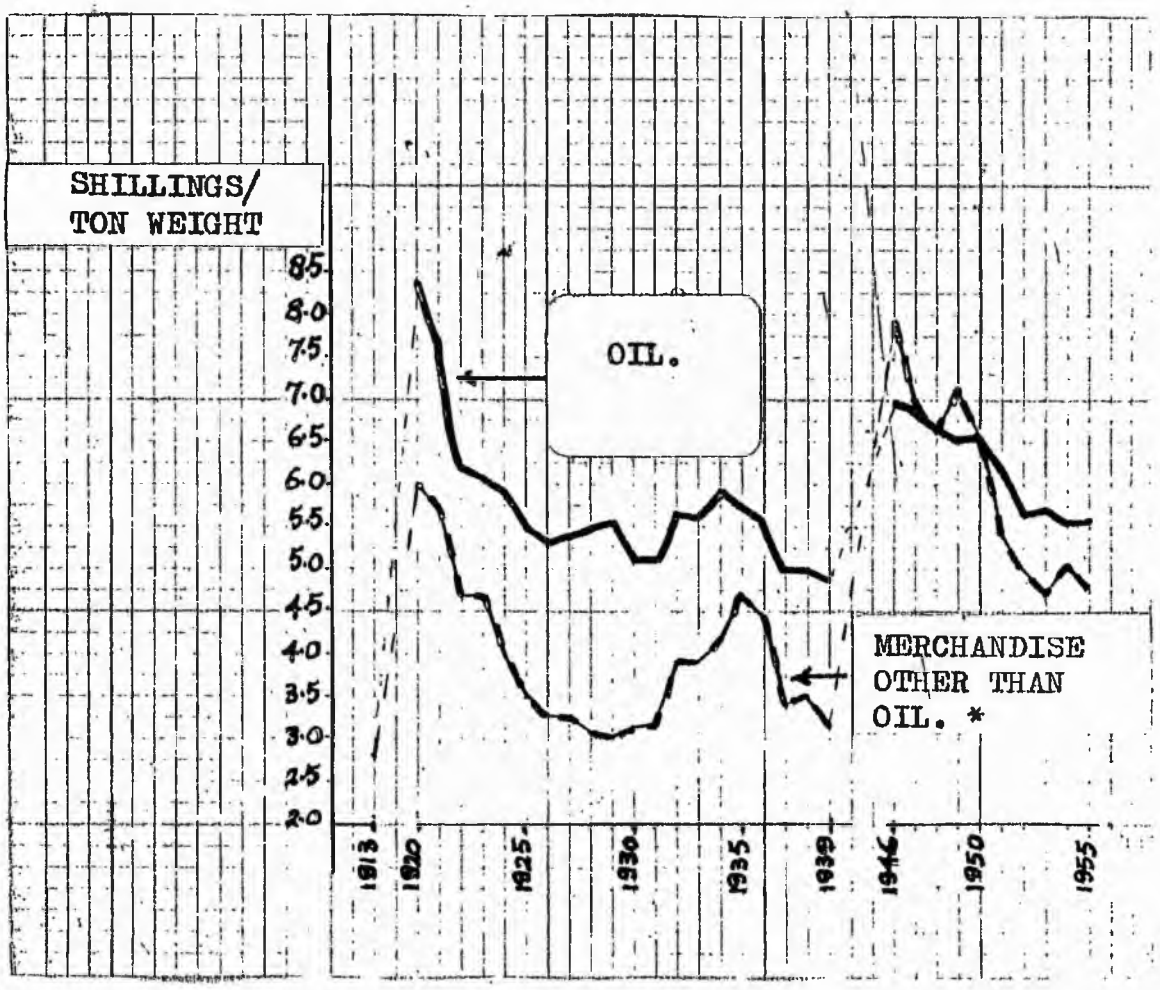
Nevertheless, the use of the actual rate of dues per S. ton in estimating the actual rate of dues per ton weight is not advisable. The fact is that there can not be any fixed relation between the vessel's occupied cargo space as defined by the Canal's regulations and measured in terms of S. tons and what that vessel might actually be carrying. Article (5) in the Suez Canal Company's Rules of Navigations stated the distinctive character of ships in ballast as follows: "Merchant ships which are not earning freight on their voyage, and which are carrying only such fuel as is necessary for their own consumption, and only their crews with the provisions for same, are considered in ballast. A ship landing her passengers

or cargo before passing through the Canal and taking them on board afterwards, will in no case be considered as being in ballast. Further, in order to be entitled to claim the benefit of the ballast rate, the volume of bunker coal or fuel must not exceed 125 per cent of the engine-room". Thus, it is quite possible that "ballast surcharge" as estimated above did not reflect the real situation, particularly in the case of dry cargo vessels which carried passengers. Vessels which were treated as using the Canal in cargo could have been partly or fully loaded.

However, it is possible to reach some sort of useful figure by approaching the matter differently. In this attempt we may rely on the declarations of ships' Captains regarding the amounts of merchandise, in tons weight, which they carried through the Canal. Such declarations should not be expected, however, to be very accurate. In Table (29) the "actual rate of dues" per ton weight has been estimated in each year of the period 1913-1955 (excluding war periods) simply by dividing the total amount of dues which merchant ships paid (whether for shipping tonnage in cargo or in ballast) by total volume of merchandise which these had carried. Again it has been essential to distinguish between oil and other sorts of merchandise for the same reasons explained previously. See also Diagram (40).

DIAGRAM (40).

ACTUAL COST OF USING THE SUEZ CANAL.



* POST PARCELS ARE EXCLUDED FROM MERCHANDISE THROUGHOUT THIS RESEARCH PROJECT.

TABLE (29)

ACTUAL COST (SHILLINGS PER TON WEIGHT) OF USING THE SUEZ CANAL

1913, 1920-1939 and 1946-1955

	Year	Oil			All Merchandise (excld. Oil)		
		Shillings per ton weight	% Change 1928=100	% Change 1948=100	Shillings per ton weight	% Change 1928=100	% Change 1948=100
W.W. I	1913	2.790	50.8		2.790	89.0	
	1920	8.360	152.2		5.940	189.5	
	1921	7.744	141.0		5.674	181.0	
	1922	6.202	112.9		4.684	149.5	
	1923	6.062	110.0		4.710	150.3	
	1924	5.904	107.5		4.014	128.1	
	1925	5.528	101.0		3.486	111.2	
	1926	5.292	96.3		3.256	103.9	
	1927	5.412	98.1		3.248	103.6	
	1928	5.494	100		3.134	100.0	
	1929	5.504	100.2		3.084	98.4	
	1930	5.112	93.1		3.196	102.0	
	1931	5.112	93.1		3.198	102.0	
	1932	5.654	102.9		3.900	124.4	
	1933	5.640	102.7		3.886	124.0	
	1934	5.904	107.5		4.202	134.1	
	1935	5.738	104.4		4.690	149.6	
	1936	5.624	102.4	84	4.398	140.3	66
	1937	5.024	91.5	75	3.428	109.4	52
	1938	4.946	90.0	74	3.482	111.1	52
	1939	4.870	88.6	73	3.210	102.4	48
W.W. II	1946	6.960	126.7	104	7.960	254.0	120
	1947	6.878	125.2	102	6.974	219.3	103
	1948	6.670	121.4	100	6.642	211.9	100
	1949	6.496	118.2	97	7.150	228.1	108
	1950	6.532	118.9	98	6.552	209.1	99
	1951	6.198	112.8	93	5.376	171.5	81
	1952	5.658	103.0	84	5.048	161.1	76
	1953	5.678	103.3	85	4.740	151.2	71
	1954	5.606	102.0	84	5.080	162.1	77
	1955	5.602	102.0	84	4.836	154.3	73

The "actual rate of dues" per ton weight which we have now obtained can only be used as a rough approximation since, again, goods which needed a larger cargo space would obviously be paying in excess of this rate and vice versa. Oil was excluded from this generalization since it was carried in its particular class of vessel. Yet, the sort of "average" which we obtained for "actual rate of dues" per ton weight may be employed usefully to help us in forming some ideas on the significance of Canal dues.

The principal question now to be considered concerns the proportion which "actual rate of dues" per ton weight had constituted in the price of goods which Britain traded with East of Suez. The answer to this question would enable us to find out whether actual Canal dues were burdensome and whether they seriously affected merchandise shipments in the Canal.

Let us consider first different sorts of dry merchandise, apart from oil. For principal articles which Britain imported from East of Suez "actual Canal dues" in 1913 comprised a percentage varying between .05% and 1.84% of the prices. The actual rate of dues per ton weight for that year has been estimated to lie in the region of 2.79 shillings; meanwhile some import prices were as high as £96.32 per ton of Australian wool; £290 per ton of Malayan rubber; and £85 per

ton of Indian tea. The payments of dues were of limited significance only in the cases of the cheaper goods such as cereals, oilseeds and unrefined sugar; for they comprised between 1% and 2% of their prices. As regards British exports to the East, textiles and machineries were highly priced and actual dues per ton weight represented something between .09% and .3% of their f.o.b. prices. Iron and steel manufacturers were exported at an average price of £11 per ton and paid another 1.3% (of the export price) when the Canal was used. On the other hand, actual Canal dues formed roughly about 20% of coal's f.o.b. prices and this was almost prohibitive.

Thus at the outset of the selected period we do find that the burden of actual Canal dues was of limited significance only in the cases of those commodities whose prices stood at £20 per ton or under. As regards other commodities outside this group, which in fact constituted the largest percentage in the value of British Eastern trade, the impact of Canal dues was insignificant. This situation was bound to remain unchanged unless a substantial rise in actual Canal dues took place or a substantial decrease in prices.

For the purpose of testing this latter conclusion the impact of actual Canal dues has been calculated for certain other years during the selected period. The results of the test is given in Table (30). In 1928 actual Canal dues were higher than those of 1913 by about 11% (1928= 100); yet in 1928 their burden was smaller because of the continuous rise in prices in the late 1920's. In 1929 prices ceased to rise and then they declined at a considerable rate in the period 1930-1936. Meanwhile, for several reasons already explained, the actual rate of dues was rising sharply. Under these circumstances the burden of the dues increases significantly.

Yet, at its highest point, the proportion which actual dues occupied in the prices of the costlier goods[15] could not however be regarded as significant in itself. During the early 1930's the percentage of the actual rate of dues in the prices of Australian wool, fresh meat and butter fluctuated under 1%. The impact of Canal dues was also of a very limited magnitude in the cases of tea, raw cotton, coffee and rubber, in spite of the considerable fall in the prices of these

---

(15) As defined above, i.e., goods of value over £20 per ton.

TABLE (30)

PROPORTION OF ACTUAL DUES.(1) PER THOUSAND, IN THE PRICES OF SOME SELECTED COMMODITIES

Proportion per Thousand of Prices (see Foot Notes)

	1913	1924	1925	1926	1928	1929	1930	1931	1932	1936	1938	1946	1948	1952	1954	1955
Wheat *	16.8	17.1	12.4	12.5	14.1	14.4	18.7	29.7	31.6	29.2						
Rice *	13.2	11.8	10.5	9.4	10.6	9.9	11.5	14.4	17.1	24.0						
Raw Coffee*	2.0				1.3	1.1	1.3	1.4	2.0	3.1						
Tea *	1.7				1.0	1.0	1.1	1.2	1.9	1.8						
Raw Sugar *	13.6	8.3	12.1	11.7	11.4	13.4	17.4	18.8	25.4	32.8						
Raw Cotton*	1.9				1.3	1.4	1.9	2.8	3.6	3.4						
Raw Jute *	5.3				5.1	4.8	6.4	8.8	10.7	12.0						
Oil Seeds *	13.8	11.7	10.2	11.2	11.0	10.6	12.8	18.1	22.4	22.9						
Rubber*	.5				1.5	1.6	2.6	4.6	8.1	3.2						
Crude Petrol*	40.8				90.7	105.8	102.5	108.6	120.2	133.0						
Coal	199.3	171.7	175.5	175.2	200.5	184.8	184.4	186.3	239.1	259.0						
Text. Machin. to India				1.8	1.8					2.3	1.6	1.9	1.2			
Iron & Steel to India				9.3	10.8					15.2	8.5	8.4	5.2			
Australian Wool				.9	.8	.8	1.2	1.7	2.3	1.7	1.5	2.1	1.0			
Australian Beef (Fresh)				4.0	3.6	3.3	3.4	4.7	6.6	8.4	5.2	7.1	5.0			
Australian Butter				1.1	1.0	.9	1.2	1.4	2.0	2.4	1.6	2.4	1.5			
Kuwait Crude Petrol													49.3	27.2	34.4	36.5

(1) All commodities marked *, Prices c.i.f. in U.K. otherwise prices are f.o.b. - U.K. exports.
(2) All prices are based on Customs declarations of value and volumes of articles imported, and exported (U.K)

commodities in the yearly 1930's. Similarly most of the principal items in the British exports to the East, with the exception of iron and steel manufactures, were only slightly burdened by the cost of using the Canal even when this considerably increased.

Cereals, oil seeds, unrefined sugar, raw jute and iron and steel were in a different category because of their relatively lower prices. As regards wheat we find that actual rate of dues had normally constituted about 1.7% of its c.i.f. price in the U.K. This percentage fell in some periods to 1.2% or 1.4% in certain years and increased to about 3%, when wheat prices fell and actual rate of dues was rising. The situation of oil seeds was very similar to that of wheat, although to a lesser extent. In the case of rice actual dues normally comprised something in the region of 1.2% and that fluctuated downward to 1% and upward to a little over 2%. The decrease in the price of unrefined sugar was remarkable during the inter-war period. Thus while in 1924 actual Canal dues had comprised only .83% of sugar price in U.K., they constituted 1.14% in 1928, and 3.28% in 1936. During the early 1930's the percentage which actual dues formed in the prices of raw jute, lead and iron and steel fluctuated between 1% and 2%.

In 1948 actual rate of dues rose by about 110% (1928 = 100) over 1939, yet its impact on prices of merchandise was less significant as prices had considerably risen during and after the War.

In Diagram (41) the actual rate of dues per ton weight is shown against the development of merchandise traffic. It can be seen that the growth of merchandise traffic in the Canal was, generally speaking, accompanied by a decrease in the actual rate of dues and vice versa. This result need not, however, be inconsistent with the above analysis, namely that the actual dues had on average formed an insignificant element in the merchandise prices. The following reasons explain the correlation which existed between the two variables. Firstly, the trades of the cheaper commodities which were sensitive to changes in prices and dues had always constituted a fairly large proportion of total volume of merchandise - and as the diagram indicates - were significantly linked with world-wide booms and depressions. Meanwhile the Suez Canal Company always adopted a cautious attitude when changing the dues so as to link them often with fluctuations in trade and profits.

DIAGRAM (41)

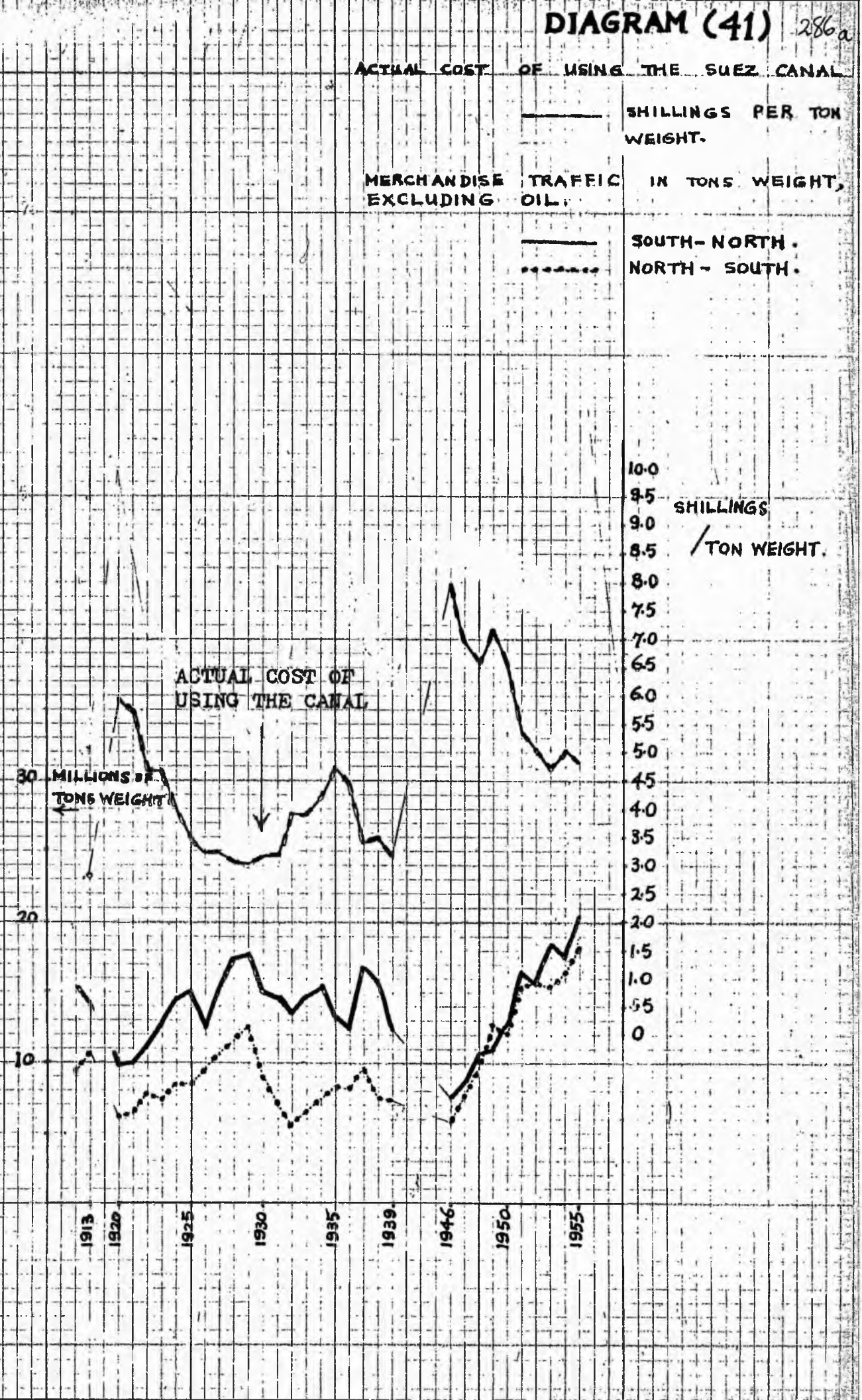
ACTUAL COST OF USING THE SUEZ CANAL

——— SHILLINGS PER TON WEIGHT.

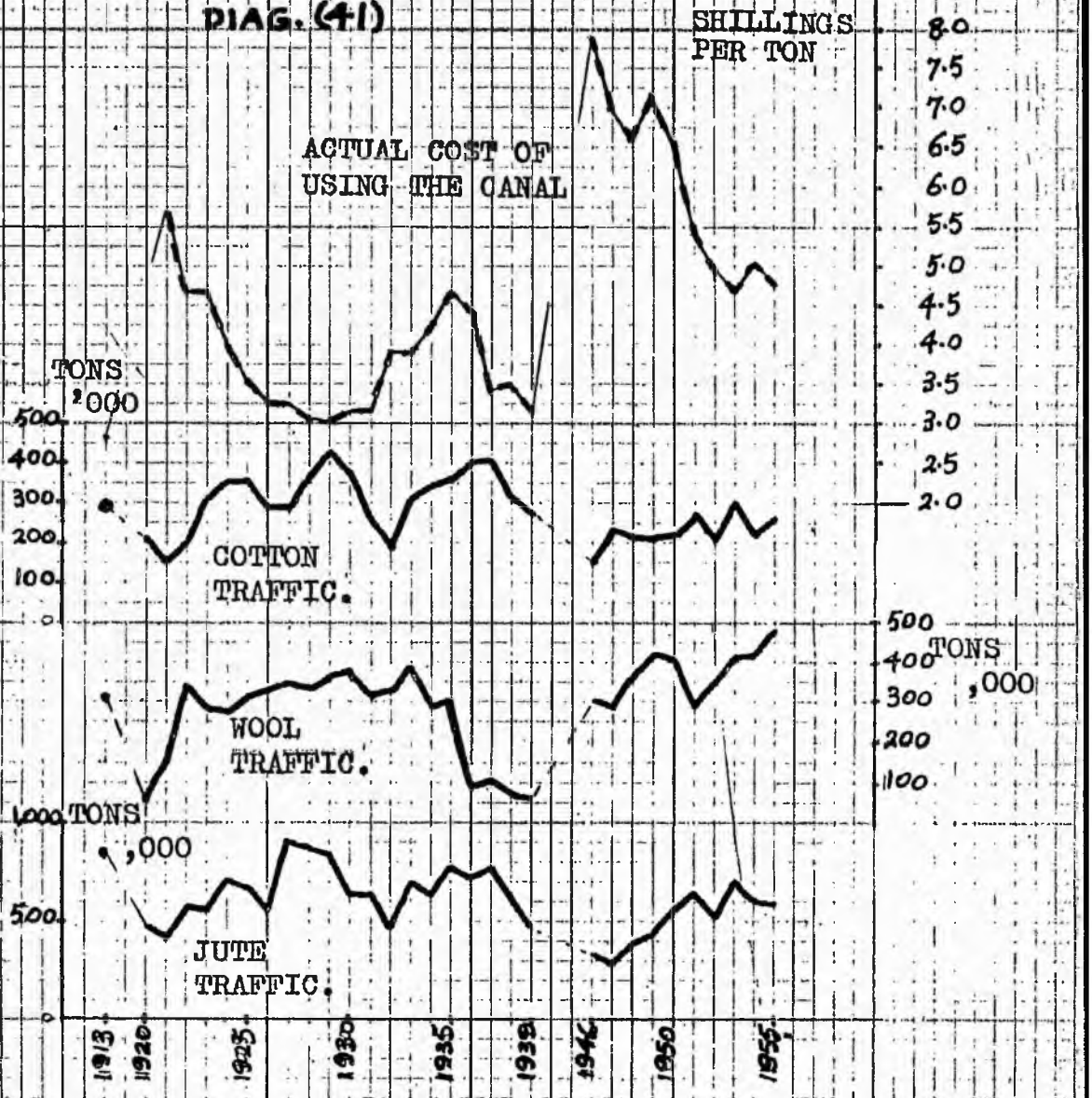
MERCHANDISE TRAFFIC IN TONS WEIGHT, EXCLUDING OIL.

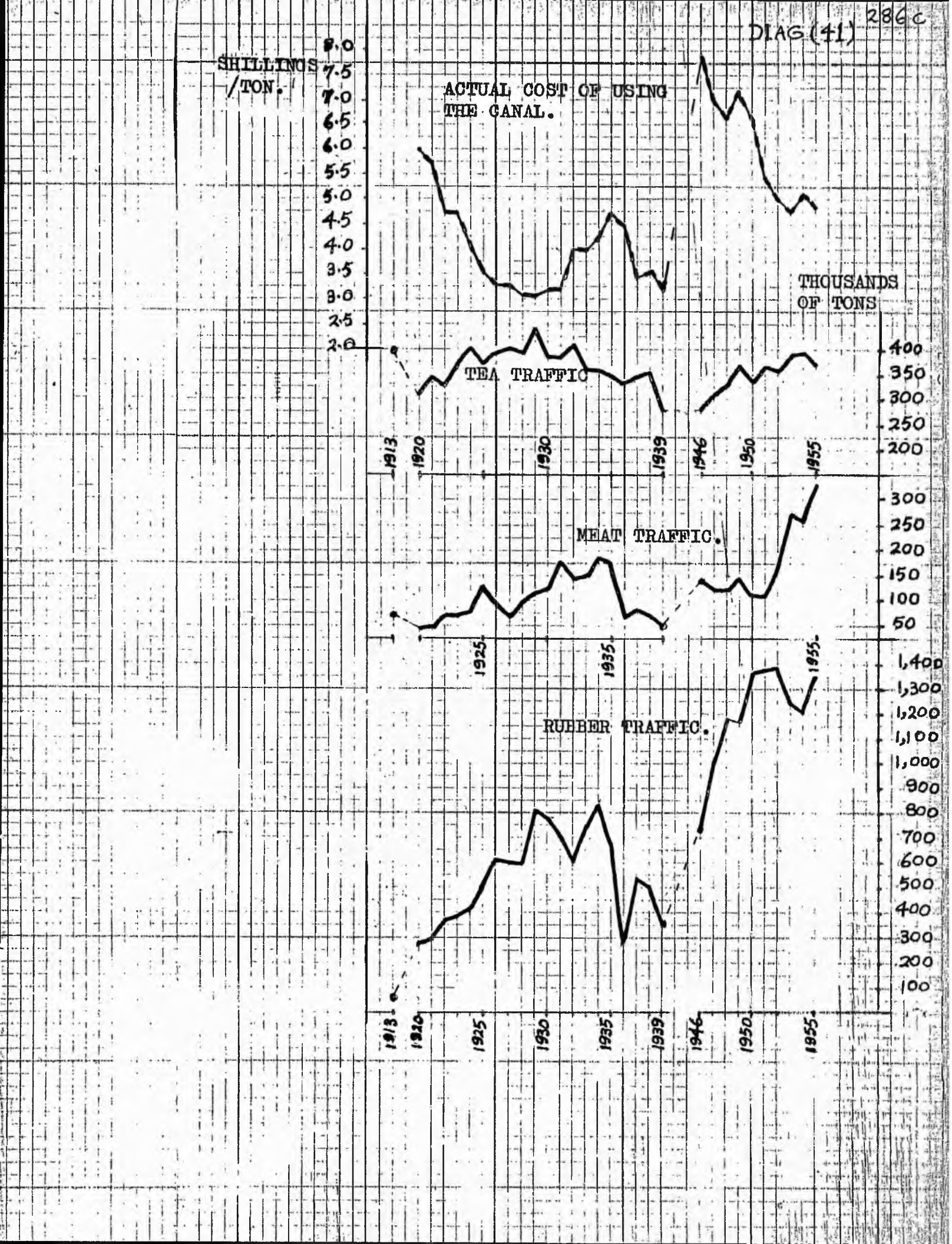
——— SOUTH-NORTH.

NORTH-SOUTH.

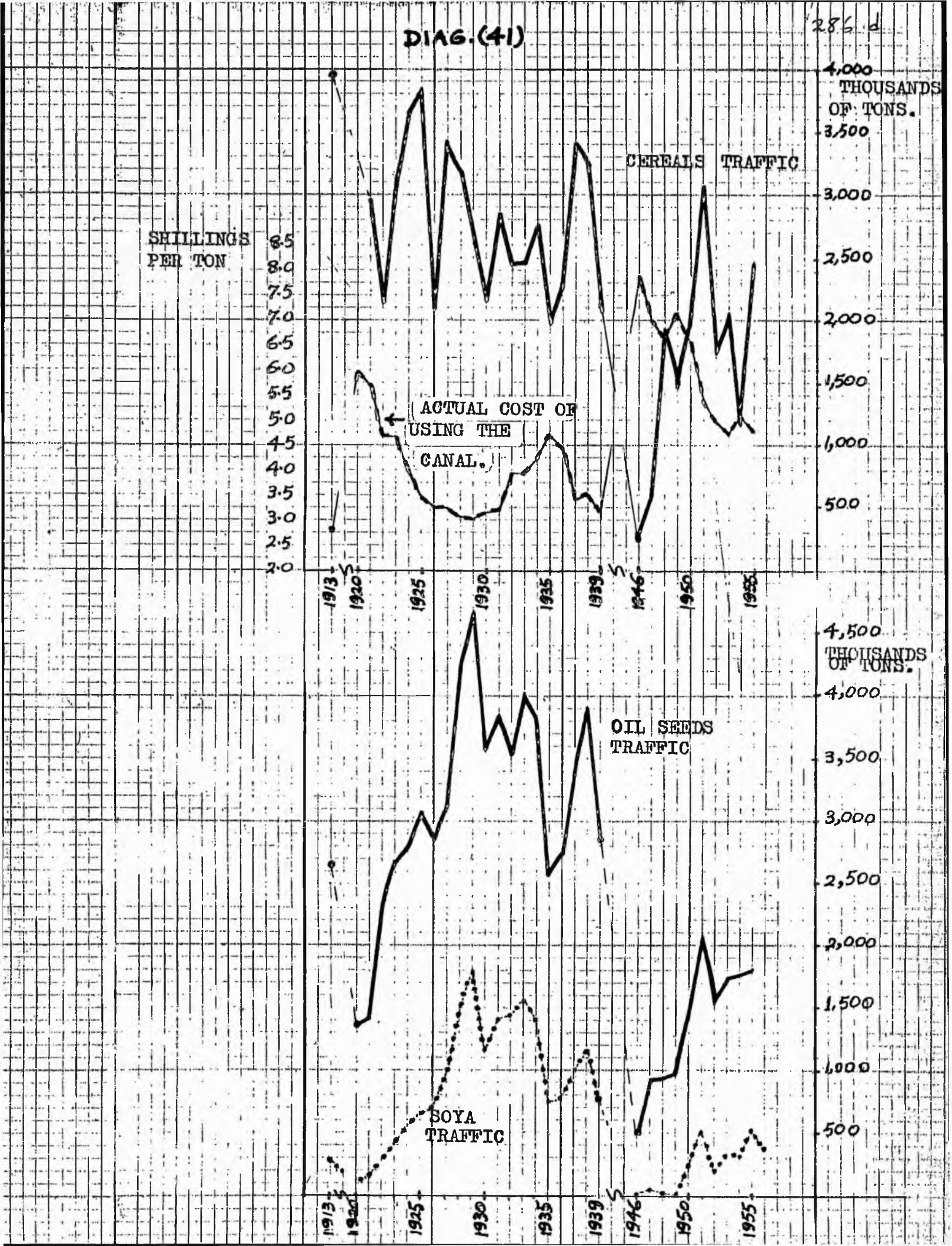


DIAG. (41)

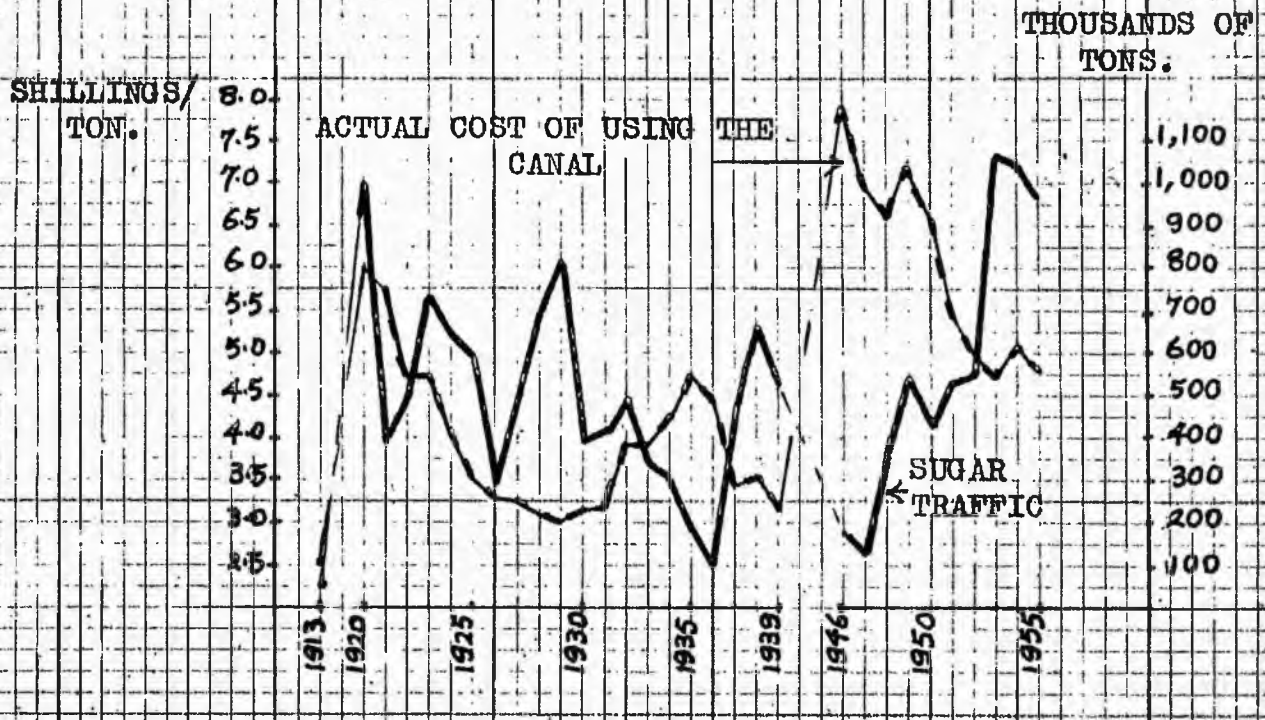

SHILLINGS PER TON
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
ACTUAL COST OF USING THE CANAL
TONS '000
500
400
300
200
100
0
COTTON TRAFFIC.
500
400
300
200
100
TONS ,000
WOOL TRAFFIC.
1000
500
TONS ,000
JUTE TRAFFIC.
0
1913
1920
1925
1930
1935
1939
1946
1950
1955


SHILLINGS /TON.
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
ACTUAL COST OF USING THE CANAL.
THOUSANDS OF TONS
TEA TRAFFIC
400
350
300
250
200
1913
1920
1930
1939
1946
1950
1955
MEAT TRAFFIC.
300
250
200
150
100
50
1925
1935
1955
RUBBER TRAFFIC.
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
1913
1920
1925
1930
1935
1939
1946
1950
1955

DIAG.(41)


28½ d
4,000
THOUSANDS OF TONS.
3,500
CEREALS TRAFFIC
3,000
2,500
2,000
1,500
1,000
500
SHILLINGS PER TON
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
ACTUAL COST OF USING THE CANAL.
1913
1920
1925
1930
1935
1939
1946
1950
1955
4,500
THOUSANDS OF TONS.
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
OIL SEEDS TRAFFIC
SOYA TRAFFIC
1913
1920
1925
1930
1935
1939
1946
1950
1955

DIAG.(41)


SHILLINGS/ TON.
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
ACTUAL COST OF USING THE CANAL
THOUSANDS OF TONS.
1,100
1,000
900
800
700
600
500
400
300
200
100
SUGAR TRAFFIC
1913
1920
1925
1930
1935
1939
1946
1950
1955

However, if we look more carefully at Diagram (41) we can see that merchandise traffic had declined in certain years when the actual rate of dues was also falling, i.e., 1926, 1935-36 and 1939. Merchandise traffic also increased in certain other years when the actual rate of dues was rising such as in 1933-34. The fluctuations of merchandise traffic in these years can in fact be explained by changes in maritime insurance rates such as in 1935-36 and 1939,(16) and by the changes in the impact of Canal dues upon freight rates as in 1926. In 1926 actual rate of Canal dues was falling and prices of merchandise were rising but as freight rates were falling heavily actual dues constituted a burden on freight earnings which induced a portion of the Suez Canal traffic to use alternative routes.

There are also other examples which could be found during the selected period to show that the impact of dues on freight rates sometimes played an important role in determining the shipments of merchandise in the Suez Canal. In 1928-1930 when actual dues were falling, prices of many commodities had not yet begun to decline as they did in the

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(16) See pages 255-257 of this Chapter. The Munich crisis and the nearness of the Second War had also dramatically raised insurance rates, particularly in the Mediterranean and that depressed Canal traffic.

following years. Yet in these three years freight rates in general were falling (17) at a faster rate than they ever did during the crisis of the 1930's. Thus the impact of actual dues on freight earnings greatly increased, thereby inducing shipping companies to select routes other than the Canal. Another example: in 1931-32 freight rates of various articles which were carried from the East to U.K. and Europe were noticeably increased, (18) yet as actual dues rose at a faster rate their burden was probably heavier than it had been in 1928-1930. The "Liverpool Steamship Owners Association" estimated that Canal dues amounted to more than 14% of gross freights in 1931. The report of this Association in 1930, 1931 and 1932 declared that shipowners trading with the East via the Suez Canal were becoming increasingly burdened by the Canal dues. The report also confirmed that a considerable amount of their trade sought alternative sea routes. They also expressed their fears that the situation was detrimental to their trade interests East of Suez. (19)

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(17) See Diagram (42), Freight Rates of all articles in the various sections of the diagram declined in 1928-1930.

(18) See Diagram (42) with few exceptions all freight rates increased in 1931-32.

(19) See A.T. Wilson "The Suez Canal", p.129,130 and 145.

DIAGRAM (42)

FREIGHT RATES ON ARTICLES IMPORTED INTO U.K FROM INDIA.
1928= 100.
SOURCE OF DATA, REVIEW OF THE TRADE OF INDIA, PUBLISHED ANNUALY BY THE GOVERNMENT OF INDIA, 1921-1940.

RAW JUTE.

RAW COTTON.

BARLEY.

LINSEEDS.

LIGHT OIL SEEDS.

RICE (RANGOON).

D = ACTUAL CANAL DUES.
F = FREIGHT RATES.

1928 = 100

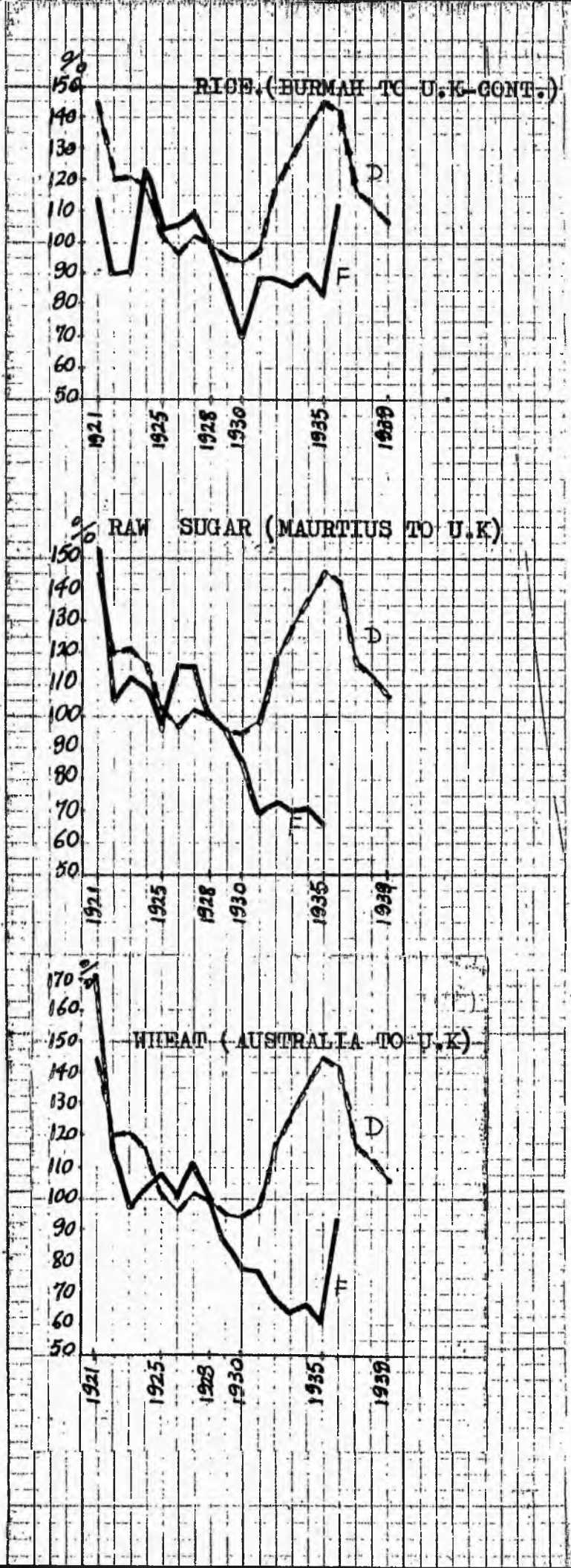

DIAGRAM (42).

SOURCE OF DATA; ARTICLE ON "TRAMP SHIPPING ,CARGO AND FREIGHTS" BY DR ISSERLIS. JOURNAL OF ROYAL STATIST. SOC., VOL 101,1938.

1928 = 100

— ACTUAL DUES.
— FREIGHT RATES.

It is difficult, however, to maintain that the increase in the impact of dues on freight rates had always decreased the dependence of trade on the Suez Canal, simply because of the lack of the necessary information as regards freight rates. Besides, as we stated above, when we investigated the burden of dues on prices and the subsequent effect on trade using the Canal, we cannot reach any definite conclusions because of the various factors other than dues which affected Canal traffic. Let us now consider the impact of actual Canal dues on oil shipments in the Canal. In Table (30) we can see that the percentage of the actual rate of dues in oil prices was continuously rising throughout the inter-war period. It increased from 9.07% in 1928 to 12.02% in 1932 and to 13.3% in 1936. It is quite conceivable that this had imposed a burden on oil shipments through the Canal. Yet, giving some consideration to South-North oil traffic in the inter-war period, see Diagram (38-a), we can see that they were rising dramatically throughout with the exception of 1931, a year in which Persian oil production was interrupted, (20)

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(20) Due to a dispute between the Anglo-Persian Oil Company and the Shah of Persia.

and freight rates were depressed; 1936-37 and 1939, years in which maritime insurance rates in the Suez route and in the Mediterranean had risen considerably. As regards North-South oil traffic during the same period a decline seems more evident in 1931 but particularly in 1936-39. North-South oil traffic was naturally declining because of the increasing competition of the Persian oil and therefore was probably more sensitive to the rise in the burden of the actual Canal dues. This would be very similar to the case of British coal exports through the Canal from the early years of the 20th century. Canal dues constituted a very high percentage of coal export prices at the same time when the production of South African, Australian and Indian coal was greatly increasing and lowering coal prices East of Suez. In the post-war period there was a clear change in the impact of actual dues upon prices of oil. Oil prices had apparently risen much faster than the actual rate of dues during the War period. Thus, in 1948 actual rate of dues formed only 4.9% and further declined in the following years. In 1952 the burden of the actual rate of dues had reached its lowest level during the selected period, i.e., 2.7% of the price. This was obviously due to the crisis of oil in Iran which raised crude oil prices and

reduced actual rate of dues (See page 257 above). Considering section (b) of Diagram (38) we find that the growth in oil shipments through the Canal was extraordinary and uninterrupted during 1946-1955, except 1951 the year which marked the Iranian oil crisis.

Finally since the Panama Canal was a rival route to Suez - in so far as British/Australian trade was concerned - it is important for us to compare their dues together. A direct and close comparison between the Panama and the Suez dues is not however possible for a number of reasons. Firstly, the Suez dues, as we have seen, were fixed in gold francs, then in sterling, and lastly in Egyptian piastres, whilst the Panama dues were assessed in U.S. dollars which were on the gold base until March 1933. Conversion of one currency in terms of the other is simply a matter of computation when the correct rates of exchange were available. Hence we would find that comparisons between the two rates of dues in terms of U.S. dollars or in terms of Sterling were held by some researchers in the past even during those periods when rates of exchange were most unstable.(21) However, there are several objections which should prevent us from holding such direct

F.N.
(21)

	Suez Canal			Panama Canal		
	Calendar Years.			Years to 30th June		
	1930	1931	1932	1930	1931	1932
Shipping using Canal (thousand net tons)	31,669	30,028	28.340	29,981	27,792	23,625
Cargo carried (thousand tons)	28,510	25,330	23,630	30,030	25,083	19,808
Dues per net ton (Canal measurement)	Francs 52,30	Francs 30.58	Francs 27.65	Cents 91.76	Cents 88.68	Cents 87.65
Dues per ton of cargo	35.88	36.26	33.16	90.16	98.26	104.54
	AT AVERAGE EXCHANGE OF PERIOD					
Dues per net ton (Canal measurement)	s. d. 5/ 2.6	s. d. 5/ 3.5	s. d. 6/ 2.4	s. d. 3/ 9.3	s. d. 3/ 7.8	s. d. 4/ 6.8
Dues per ton of cargo	5/ 9.5	6/ 3.3	7/ 5.2	3/ 6.0	4/ 0.8	5/ 4.4

Ref. A.T. Wilson, The Suez Canal, p.148 (see also p.149)

A. Wilson exchanged dues per net ton (third line) at average exchange of period which was violently changing. He also calculated dues per ton of cargo by dividing gross revenues from dues by total cargo carried. This latter approach was certainly less vulnerable tocriticism.

comparisons in this respect even after the rates of dues of the two canals have been converted in terms of a single currency. These objections are given below. Considering now the gross revenue from Canal dues which would be essential for any calculations of actual rates of dues (i.e., revenues divided by tons of cargo or by total net shipping tonnage using the Canal) we find that the matter is not as simple as that above. It is almost impossible that the Suez and the Panama gross revenues from dues could be accurately compared owing to the different periods for which accounts were kept. The Panama Canal always kept accounts for years ending the 30th June while the Suez Canal accounts were kept on the basis of the calendar year. We may be able to assume sometimes that the two canals traffic and dues revenues could be compared on this basis, yet such an assumption can never be maintained in all the periods which witnessed notable, or violent, changes in rates of exchange or in international trade. Secondly, the Panama and the Suez dues were fixed per net tonnage of shipping, yet this was defined differently according to each canal's rules of measurement. Theoretically speaking, it was possible to determine the Panama net ton as a percentage of the Suez net ton but the case in practice was

different. To give an example we may quote the following information from the Panama Canal publications. (22)

Net Tonnage Measurement

	Passenger Ship Matsonia-U.S.	Freight Ore/Oil Lise Fritzenger.	Tanker Bunker Hill-U.S.	Motor Cargo Los Angeles-Swed.
Suez	18,352	14.181	8.154	6,804
Panama	12,890	13,494	7,745	6.430

(1958 Statistics).

(22) In three cases in this numerical example the Panama rules of measurement produced a net tonnage averaging about 94% of the Suez net tonnage. Yet in the case of the passenger ship "Matsonia"the Panama net tonnage was about 70% of that of the Suez Canal. Professor Emery Johnson in " Report to Congress on Panama Canal Traffic", 1914, gave information which suggested that the Panama Canal measurement produced a net tonnage averaging 66% of the gross while the Suez Canal made the average net tonnage of all vessels using that Canal 72% of the gross, i.e., Panama net tonnage was about 91.7% of the Suez net tonnage.

Thirdly, as regards ballast dues which were always lower than cargo dues each canal again had its own regulations concerning what should be regarded as a vessel in ballast. In this respect also the Suez treatment of ballast tonnage differed from the Panama Canal.

It is desirable however to obtain some approximate idea about the relation which existed between the rates of dues of the two waterways. This can be seen in Table (31) where annual tolls were divided by net tonnage of transiting ships. It is clear that the method which has been adopted in calculating the figures of this Table has reduced the amount of errors which would result if a direct comparison was made between the official rates of dues of the two canals. Indeed, some of the objections which we stated in the above discussion would still prevent any close comparison between the actual rates of dues of Suez and Panama. (23)
It can be noticed from Table (31) that the Suez dues had always been higher than those of the Panama Canal. In 1920 and 1925 the difference was as large as 52 and 54 cents per ton measurement respectively. In all other years (excluding 1945) except 1955 the difference varied between 13 and 26 cents per ton. In 1955 the Suez dues were only 3 cents per ton above those of Panama.

TABLE 31 (Panama Canal Publications)

AVERAGE TOLLS PER MEASUREMENT TON

(Annual Tolls Divided by Tonnage of Transiting Ships)
(Cost per Net Ton to Shipping)

Suez. (Rounded Average)	Year	Panama (Rounded Average)
∅ 2.30	1370	∅ -
2.73	1875	-
2.52	1880	-
1.87	1885	-
1.83	1890	-
1.73	1895	-
1.73	1900	-
1.63	1905	-
1.48	1910	-
1.14	1915	.88
1.59	1920	.87
1.43	1925	.89
1.28	1930	.90
1.05	1935	.92
.97	1940	.77x
1.54	1945	.38x
.98	1950	.81
.88	1955	.85
.86	1958	.87

x High proportion of World War II toll-free transits

(23) In the light of the discussion about dues which we have given in this Chapter we can also see that there are other deficiencies which would arise from dividing gross revenues from dues by net tonnage of shipping using the Canal when calculating the actual rate of dues. For example net tonnage of shipping consisted of commercial traffic - which we need for our purpose in this research - and also passenger, mail and warship traffic. Besides, gross tolls revenues of the Panama Canal were normally deflated by the particular exemption from dues given to Panamanian and Colombian warships as well as ships passing solely for purpose of repair at Panama Canal yards (See Encyclopaedia Britannica, Vol.17, p.172-B).

There are other sources of information which actually confirmed that the Suez dues were higher - considerably higher sometime - than those of the Panama Canal during the 1920's and the 1930's. But at the same time there is no such evidence as to suggest that such difference in itself had determined at any time the choice of route. During the 1930's the difference between the dues of the Suez Canal and those of the Panama Canal was one among several other factors which increased the share of the latter route in Australasian traffic.(24) Yet even during these years when many factors discouraged the use of the Suez Canal the main flow of Australian traffic to Britain continued to flow through it because of the possibility of picking up much greater volumes of intermediate traffic en route. Most of British/

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(24) The "Report of Liverpool Steam Ship Owners' Association" for 1930, p.14, stated that "The Suez Canal dues compare very unfavourably with those of the Panama Canal; the net tonnage as calculated by the Suez Canal Company is considerably greater than the British registered net tonnage, whereas on the Panama Canal basis of calculation it is less.....the effect of this difference in tolls has been to divert a considerable amount of tonnage to the Panama Canal". However, there were many other factors which we have already discussed and which discouraged the use of the Suez route in that period. See also "Compagnie Universelle Du Canal de Suez", by C. Funck-Brentomo, p.222.

New Zealand trade was nevertheless dependent on the Panama Canal and the Cape route.

During the post-war period the actual rate of dues of the Panama Canal was rising whilst that of the Suez Canal was falling. In the foregoing pages of this Chapter we showed that two large cuts in the official transit dues of the Suez Canal were made in the post-war period. The situation was different with the Panama Canal. "The toll rates, 90 cents a ton for laden vessels and 72 cents a ton for ships in ballast, are virtually the same as when the Canal was opened."(25) Thus by 1955 the Panama Canal dues were slightly under those of the Suez Canal and it is probable that the case in practice was even opposite to that.

(e) The Rivalry of Pipelines.

With the discovery of rich oil-fields in Iraq in the early 1930's it was fully understood that the construction of pipelines to convey the product to the Mediterranean was a necessary means of commercial development. Kirkuk oil-field and the rest of the early discoveries all lie in the northern region of

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(25) Quotation from "Encyclopaedia American", Vol.21, p.237 When the Canal was opened dues were one dollar per net ton and sixty cents per ton for vessels in ballast and throughout the period under review, i.e., 1915-1955, they fluctuated a little around these original levels.

Iraq far from the Persian Gulf which is the country's only outlet to the Sea. Building up a pipeline from the oil-field to the Gulf seemed utterly uneconomical since the costs of such a scheme would have probably been as much as those which were necessary for constructing the direct connection to the Mediterranean. An additional journey of about 3,500 sea miles, from the Persian Gulf to the Mediterranean, and the payments of Canal dues apparently weighed the scale in favour of using the Mediterranean outlet rather than the Gulf ports for Iraqi northern oil. Two pipelines of 12 inches diameter were laid from Kirkuk to Haifa and Tripoli and they came into service in 1934. They were capable of transporting about four and a half million tons of oil annually between them. There is some evidence (26) which suggests that the flow of Persian oil through the Suez Canal in the years 1934-1939, and also in the immediate post-war years, was affected by the building of the Kirkuk pipelines since these placed the Iraqi oil in a much better competitive position; for they considerably lowered costs of transport to the main market in Western Europe. Although there is not much statistical support for this point, it is quite conceivable, because costs

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(26) Compagnie Universelle du Canal de Suez. C. Finck Brentano, p.224 and 225.

of transport were among the principal factors which hindered the growth of the Persian oil industry before the War. The success of the pipeline system in Iraq in the pre-war period, besides the anticipated expansion in several new fields around the Persian Gulf, strongly encouraged the introduction of some new projects of pipelines to carry oil directly to the eastern coast of the Mediterranean instead of going through the Red Sea and the Suez Canal. In Iraq, a new 16 inch line was laid from Kirkuk to Tripoli instead of the one which served before the War. A similar scheme was undertaken to expand the capacity of Kirkuk-Haifa line but after 1948 the line was entirely abandoned for political reasons. A second 16 inch line was then constructed to Tripoli to replace the Haifa line and the combined capacity of the two northern lines reached about 10 million tons a year after 1951. Between 1950 and 1952 a 30/32 inch line was constructed from Kirkuk to Banias and that was designed to carry 14 million tons a year.

In the Persian Gulf area there were two major schemes. The first was the Trans-Arabian Pipeline (TAPLINE) 30/31 inch in diameter of 1,070 miles from Aramaco oil-fields in Saudi Arabia to the Mediterranean coast. The TAPLINE was designed to carry 15-15.5 million tons a year by the construction of additional pumping

stations. The second enterprise was a line with pipe of 36 and 34 inch diameter that would deal with oil both from Abadan and Kuwait. The line was to have a capacity of 26 million tons a year and with 500 miles of its length in Iraq and 280 in Syria would allow for seven pumping stations. Only the first of these projects, Tapline, was carried out in practice. The second failed to obtain the necessary sanctions from the Iraqi government and so was abandoned. Unlike the earlier cases of the northern lines from Kirkuk, the TAPLINE, or similarly any other project to carry oil from the Persian Gulf to the Mediterranean, offered a serious challenge to the Suez Canal. We need therefore to investigate the new situation and to find out the influence which it might have had on the flow of oil in the Suez Canal. The factors which would determine whether Persian Gulf oil should be carried through the Suez Canal in tankers or by pipelines across the desert to the Mediterranean coast are numerous and undoubtedly complicated. In the first place it could be merely a matter of simple comparison between the costs of each way, yet before the final choice is made several other economic and political factors must be taken into account. Besides, in a very competitive industry such as oil industry the choice between two ways of transportation, which

would necessarily entail a huge amount of investment in one direction rather than the other, will have to be made in the light of the long-run world oil supply and demand. The decision can not also be separated from the competitive situation of the Middle East Oil industry in the world markets.

To progress systematically in our analysis we shall first resort to Diagram (43). In section (a) of this diagram there are three vertical axes U,P, and L. "U" measures the export price of a ton of crude oil at the U.S. Gulf and the freight rate per ton for the journey from this source to London. "P" measures the export price of a ton of crude oil at the Persian Gulf and the freight rate per ton for the journey from this source to London via the Suez Canal. "L" measures the c.i.f. price per ton of crude oil of the same gravity as that of the U.S. Gulf and the Persian Gulf.

Three assumptions will be made before we proceed further:

1. Let us assume that the two centres of production, i.e., the U.S. Gulf and the Persian Gulf, are completely independent of each other, so that each of them will set its own export price, which would reflect its own costs.

2. Let us assume that the costs of transport are principally determined by the length of the journeys and that they remain constant.

3. Let us assume that the c.i.f. price of crude oil in London will always be determined according to the competition between the two centres of production, so that the lower price will always prevail.

The diagram and the number of assumptions we make simplify the case in practice considerably yet they do not introduce any misleading concepts. The correctness of the first assumption which I made, i.e., that export prices are determined independently in the U.S. Gulf and the Persian Gulf, is disputed only for the pre-war period. It is generally believed that by that time oil prices any where in the world were determined according to "U.S. Gulf Plus" formula, i.e., U.S. Gulf export price plus freight rate from the U.S. Gulf. (27) This in fact meant that the Persian Gulf export price was burdened by the cost of transport of the journey from the U.S. Gulf to the Persian Gulf. To export their oil to London, Persian Gulf producers had to pay the transport costs. After that, according to the "U.S. Gulf Plus" formula, the Persian Gulf oil

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(27) See The Price of Middle East Oil, Leeman, W., p.89-93.

producers had to accept a loss equal to the difference between their huge cost of transport and the lower price as determined by the U.S. Gulf producers. Available evidence points out that Persian Gulf oil companies accepted that situation. Yet as these companies produced the oil and provided transportation and marketing facilities they most probably covered their huge losses in the transport stage by profits in the production stage. In this case the acceptance of the "U.S. Gulf Plus" formula for determining the export price at the Persian Gulf could have been official only and good only for book-keeping and financial analysis. In fact, the actual export prices of the Persian Gulf were revealed in the few "spot sales" or short term contracts which were made by major Persian Gulf oil companies with non-affiliated companies. In these sales, where buyers had to cover costs of transport Persian Gulf oil was sold at about 16 cents per barrel lower than U.S. export price.(28)

As regards the second assumption there is no doubt that freight rates are greatly affected by the length of the journey. However freight rates are subject to

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(28) A Financial Analysis of Middle Eastern Oil Concessions: 1901-65. Zuhayr Mikdashi, U.S. 1966, p.96-97.

the influence of many other factors and to changes from year to year. However if we make another assumption, that freight rates are principally determined according to the length of the journeys and they are changing everywhere in the world at the same rate, then, at any point of time, the relation between the freight rate of the journey from the U.S. Gulf to London and that of the journey from the Persian Gulf to London, will always be constant as it will roughly reflect the relation between the distance from the Persian Gulf to London and the distance from the U.S. Gulf to London. This assumption would roughly represent the case in practice and at the same time it does not contradict the assumption which underlines the diagram.

Now we have three cases to explain in the light of section (1) Diagram (43):

1 - "oc" is the export price in the U.S. Gulf at a period t_1. Since the cost of transport for the journey to London is equal to "cs", the c.i.f. price per ton of U.S. Gulf crude in London will be equal to: oc + cs = os which is equal to "df" on the vertical axis marked "L".

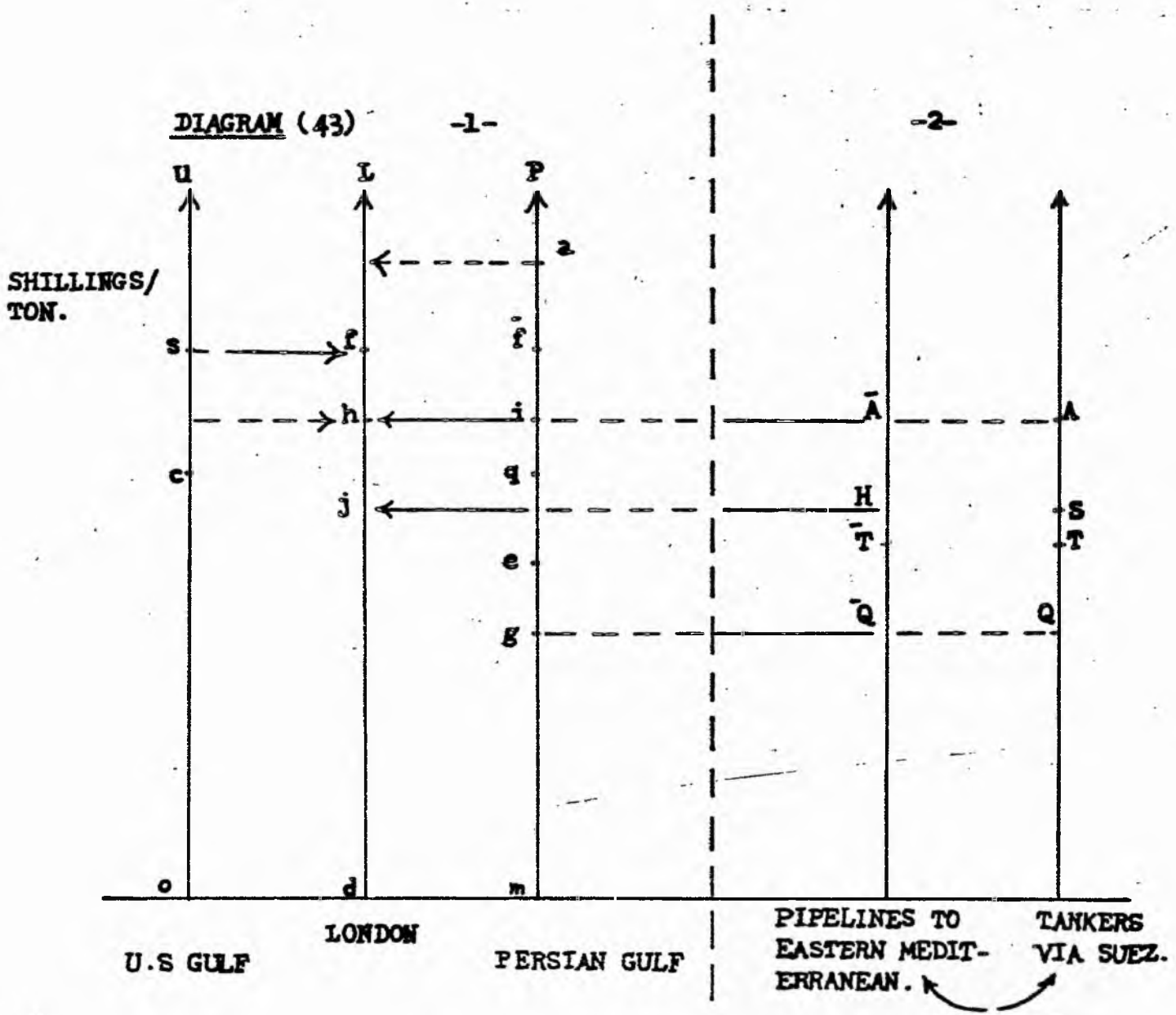
DIAGRAM (43)
-1-
-2-
U
L
P
SHILLINGS/
TON.
a
s
f
f
h
i
Ā
A
c
q
H
S
j
T̄
T
e
Q̄
Q
g
o
d
m
LONDON
U.S GULF
PERSIAN GULF
PIPELINES TO
EASTERN MEDIT-
ERRANEAN.
TANKERS
VIA SUEZ.
PERSIAN GULF.

If at the same period the export price per ton of crude at the Persian Gulf is also equal to "oc", i.e., mq = oc, the Persian Gulf producers must accept a loss equal to "fa" per ton if they intend to sell in London. "fa" is the difference between "qa", the cost of the journey from the Persian Gulf to London via the Suez Canal, and "cs" the cost of the journey from the U.S. Gulf.

2 - At a period t_2, U.S. Gulf export price is equal to "oc" and the Persian Gulf export price is equal to "me". "me" is less than "oc" by the difference between the cost of the journey from the U.S. Gulf to London and that from the Persian Gulf to London, i.e., oc - me = qa - cs. Thus both Persian Gulf and U.S. Gulf producers will sell crude oil in London at a price equal to "df" without incurring any losses. Leaving aside the accounts records of the Persian Gulf oil companies which officially recognized the U.S. Gulf Plus formula, this was most probably the situation which existed before the Second World War.

3 - At a period t_3, U.S. Gulf export price is equal to "oc" and Persian Gulf export price is equal to "mg". The c.i.f. price in London will be equal to dh (gi = qa). In this situation U.S. Gulf producers will incur losses equal to "fh" per ton if they are still interested in selling in London. This was

gradually becoming the situation in the post-war period. Oil production in the Persian Gulf increased at a much greater rate than it did in the U.S. and other countries in the world. The cost of oil production in the Persian Gulf was also declining at a considerable rate. Thus in spite of the fact that the cost of moving the Persian Gulf oil to London and to other markets in Western Europe was still noticeably higher than that of the journey from U.S. Gulf to London, Persian Gulf oil companies successively managed to cut down oil prices and to capture an increasing portion of the market previously supplied by U.S. Gulf producers. Although their competitive situation was greatly strengthened by the extraordinary expansion in their oil production, Persian Gulf producers were more determined in the post-war period to reduce their costs of transport to the main market in Western Europe. Hence, a system of pipelines to carry the oil from the Persian Gulf to the Mediterranean was thoroughly investigated and planned to meet the anticipated increase in sales to the West. For this part of the discussion we move to section (2) of Diagram (43) in order to demonstrate the solution offered by the pipelines. QA = gi = qa = the cost of the journey from the Persian Gulf to London via

the Suez Canal. QA = AS + ST + QT, where "AS" represents the costs of transport for about 3,500 miles from the head of the Persian Gulf to the entrance of the Mediterranean, "ST" represents costs of using the Canal per ton, and finally "QT" represents costs of transport for the remaining part of the journey, i.e., from the eastern entrance of the Mediterranean to London. A pipeline from the Persian Gulf to the Mediterranean will firstly save $\overline{AH} = AS$ which represents the costs of transport from the Persian Gulf to the entrance of the Mediterranean. Secondly, ST the Suez Canal dues will also be saved. But against these savings there are the costs of building and operating the pipeline and the overland transit dues which are to be paid to the host governments which would allow the companies to extend the pipeline over their land or to their ports. Oil companies estimated these expenses to be much lower than the cost of transport from the Persian Gulf to the entrance of the Mediterranean including the Suez Canal dues. In terms of the diagram we shall assume that the total cost of moving oil from the Persian Gulf to London by using a pipeline is equal to $\overline{QH} = \overline{QT} + \overline{TH}$, where $\overline{QT} = QT =$ the costs of transport of the journey from the Eastern Mediterranean to London and where $\overline{TH}$ represents the cost of using the pipe line per ton including overland transit and port dues to host governments.

Now if the c.i.f. price per ton of crude oil in London is equal to "dh" before the completion of the pipeline, it will be possible once the new system of transport is in operation to cut it down to "dj" or to make extra profits equal to jh . HÁ per ton. In either case the Persian Gulf producers will strengthen their competitive position in the London market and may force out the U.S. Gulf producers if these can not cut their prices to the same extent.

The foregoing result can be held to be valid under two essential conditions.

These conditions are:

1. That pipelines are constructed with sufficient capacity and designed to carry "total" or the "largest proportion" of sales to the market West of Suez.

The greater the extent to which this condition is unfulfilled, the greater is the proportion of oil left to be carried at the "higher" cost of transport (i.e., through the Suez Canal) and the lesser the ability to use the economic advantages of pipelines in lowering oil prices. To explain this further let us assume that the greater volume of Persian Gulf oil will be going through the Suez Canal. In this case lower export prices, reflecting lower costs of transport, can not be offered to buyers at the Eastern Mediterrean since this would entail discrimination against the majority of buyers at the Persian Gulf.

If oil companies accept the lower price for all buyers, losses will be incurred in the transport stage as oil companies will be then in effect absorbing freight rates on shipments from the Gulf to the entrance of the Mediterranean.

If the capacity of pipelines is sufficiently large to carry a major proportion of oil exports from the Gulf, economic gains resulting from the operation of the system may then allow Middle East companies to offer lower export prices to all buyers (at the Eastern Mediterranean as well as at the Persian Gulf) without incurring any losses in total.

2. That overland transit dues to host governments, whose lands or ports are used for pipeline operations are negotiated on a long term basis at a rate which will not seriously encroach upon net gains achieved by avoiding the sea journey from the Gulf to the Mediterranean and the payments of the Canal dues.

The first of the foregoing conditions could not be fulfilled in practice for various political, and sometimes economic, reasons. For example when a pipe line was projected to carry oil from Abadan and Kuwait through Iraq and Syria, the Iraqi government imposed prohibitive conditions on the building of the pipeline in its land. It was strongly believed in Iraq that the project would jeopardise the trade

interests of Iraqi oil if it was to serve the interests of the rich oilfields in the Persian Gulf. The project was consequently abandoned.

To discuss the fulfilment of the second condition we have to trace the development of events between the owners of the pipelines, IPC and ARAMCO, on the one side and Syria, Lebanon and Jordan on the other. These are the three countries which gave permission for the laying of pipelines through their territories and in the case of Syria and Lebanon, also for the use of their ports.

In 1931, a convention between the IPC and the Syrian government provided for the latter to receive an annual payment of £400,000 for allowing the transit of Iraqi oil through its territory. Other sums of money were also paid by the IPC to the governments of Lebanon, Jordan and Palestine (Kirkuk-Haifa line) (29) In 1947 IPC volunteered to pay to Syria ex gratia transit fees of £75,000 sterling a year, raised to £108,000 in 1950 and £45,000 to Lebanon. From 1950 onwards increasingly higher shares in the profits of IPC pipelines were demanded by the governments of

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(29) Kirkuk-Haifa pipeline was abandoned after the establishment of Israel in 1948 and the refusal of the Arabs to let their oil go through what was regarded as an enemy land.

Syria and Lebanon. It was believed in these two countries that IPC was achieving a high rate of return by transporting oil through their territories instead of relying on tanker shipments from the Persian Gulf through the Suez Canal. Another reason was that the search for indigenous oil in either Syria or Lebanon had proved a failure and therefore their oil interests were bound to be concentrated on the business of transit, shipping or refining oil produced in the nearer territories. In the absence of any clear means of measuring the profitability of pipelines and under circumstances of unstable political systems, particularly in Syria, negotiations on transit and port dues between successive governments and IPC were inevitably prolonged and the validity of any agreement was always doubted. In 1952 after long negotiations the IPC agreed to raise transit and port dues to the Lebanese government to £450,000 a year. Yet before the agreement was ratified by Parliament dissatisfaction was shown inside Lebanon and better terms with IPC were sought. Another example was the agreement reached between IPC and the Syrian government before the construction of the Kirkuk-Banias oil line. In 1952 and after the pipeline was completely finished this agreement was considered unfair by the Syrian government and demands were raised for increased

payments, on levels quite remote from those previously concluded. The Syrian government asked for half of the profits resulting from the saving of the sea journey from the Persian Gulf to the eastern Mediterranean. It also asked for the building of a refinery inside its territory and for the delivery of some free amounts of crude oil. Negotiations then started, and only in 1955 an agreement was reached and the principle of 50:50 profit sharing on pipeline operations was accepted by the IPC. Profitability was to be assessed on the basis of a hypothetical journey by sea from Fao (Iraqi port at the Persian Gulf) to the Eastern Mediterranean. The new agreement was to raise Syria's transit and port dues to £6½ million sterling in 1956. IPC also agreed to pay the government of Syria the sum of £8½ million sterling in settlement of all outstanding claims. On every occasion when Syria succeeded in obtaining higher transit dues the IPC expected to be asked for a similar treatment or even better terms by the Lebanese government.

The situation between TAPLINE (of ARAMCO) and the governments of Syria and Lebanon during the early 1950's ran in more or less the same way. Agreements which TAPLINE made in 1946 and ratified in 1947 were changed in 1952 with the result that more transit payments were made to Syria, Lebanon and also to Jordan. In

1955 after the government of Syria succeeded in assuring the principle of 50:50 profit sharing in pipeline operations it was announced that the TAPLINE was going to be asked for similar terms.

It is not our purpose here to discuss the fairness or the unfairness of the demands which Syria or Lebanon had raised in the period 1947-1955. Our sole concern is to emphasise that under these circumstances it was almost impossible for oil companies to reach any long term agreement on overland transit dues. Had that been possible more pipelines would probably have been built and an independent lower price of oil at the eastern Mediterranean might have been established. The second point which must be emphasised concerns the continuous rise in overland transit payments. Demands for higher transit dues, as explained, were always made, and were eventually accepted, because of a difference between the costs of pipelines and the costs of the sea journey from the Persian Gulf to the Mediterranean via the Suez Canal. Increase in transit payments tended always to remove such a difference and in 1955 agreement of 50:50 profit sharing in pipeline operations was a clear acceptance of the principle of dividing the economic advantages which these pipelines produced.

The tendency towards closing the gap between the costs of the shorter distance from the Gulf to the Mediterranean and the costs of the longer sea distance through the Suez Canal was a clear sign that the essential purpose of building pipelines was far from being achieved.(30) The final point in this discussion concerns the influence which the pipelines had on the shipments of oil through the Canal. Apparently Western countries which relied on Iraqi or Saudi oil rather than Kuwaiti or Persian oil depended far less on the Suez Canal particularly after the TAPLINE was constructed. The case with Britain was different, however.

During 1946-1951 British oil imports from East of Suez came mainly from Iran, Kuwait and Saudi Arabia while Iraq ranked fourth in importance. In 1951 imports of Iranian oil were considerably affected by the nationalization of AIOC,(31) and subsequent intervention of the British government. In 1952-1953 imports of Iranian oil were nil and they were replaced by an

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(30) The gap was also closing because of the considerable increase in tankers' size and the consequent fall in the costs of the sea journey from the Gulf.

(31) AIOC, Anglo-Iranian Oil Co.,Ltd.

increase in British oil imports from Kuwait, Iraq and Saudi Arabia. In 1954-55 imports of oil from Iran were resumed but they were very much below their 1950 level. Imports of oil from Saudi Arabia had meanwhile decreased considerably during 1953-1955. See also Table (32).

To estimate how much oil Britain imported from the Middle East through the Suez Canal during the period 1947-1955 we shall assume that throughout the period Iraqi oil was purchased directly from the Eastern Mediterranean coast and that all Saudi Arabian oil came through the Suez Canal until 1951, and thereafter through the TAPLINE. On this basis the amounts of Middle Eastern oil which came to U.K. through the Suez Canal have been estimated and in Table (33) they were compared with figures supplied by the Suez Canal for Northbound oil shipments to U.K. The two sets of figures showed close correspondence only in 1948-50. In 1951 the figure which I have estimated was larger than that of the Canal company by 1,840 tons. In that year I assumed that all the oil from Saudi Arabia, 3.907 mil. tons, had come via Suez which might have not been the case. It is possible that in 1951 some amounts of Saudi oil had been shipped to the U.K. from the eastern Mediterranean coast. In 1952-1955

TABLE No. (32)

BRITISH IMPORTS OF PETROLEUM AND PETROLEUM PRODUCTS FROM THE MIDDLE EAST.

Figures in Millions of Metric Tons

	1947	1948	1949	1950	1951	1952	1953	1954	1955
I - Empire Sources:									
Kuwait *	*	*	*	*	*	13.063	15.702	17.725	16.324
Bahrain	.426	.810	2.516	4.162	9.066				
Qatar									
Oman						1.001	1.880	2.183	2.889
Aden	.008	.020	.003	.007	.073				
Total Division I	.434	.830	2.519	4.169	9.139	14.064	17.582	19.908	19.213
II - Foreign Sources;									
Saudi Arabia	.257	.781	1.027	1.082	3.907	3.422	.227	.206	.376
Iraq	.074	.769	.476	.493	.562	4.056	6.496	5.200	3.907
Iran	2.249	4.359	4.325	4.885	2.687	-	-	-	1.336
Total Division II	2.580	5.909	5.828	6.460	7.156	7.478	6.723	5.406	5.619
Total Middle East (I) +(II)	3.014	6.739	8.347	10.629	16.295	21.542	24.305	25.314	24.832

* Kuwait was included with Bahrain, Qatar and Oman up to 1951.

Source: Annual Statement of the U.K.
(Official figures were given in thousands of gallons).

TABLE (33)

In Mil. of Metric Tons

U.K. Imports	1947	1948	1949	1950	1951	1952	1953	1954	1955	
Estimated Oil Came via Suez										
Kuwait & Others	.434	.810	2.516	4.169	9.066	13.063	15.702	17.725	16.324	
Iran	2.249	4.359	4.325	4.885	2.687	-	-	*	1.336	
Saudi Arabia	.257	.781	1.027	1.082	3.907	-	-	-	-	
TOTAL	2.940	5.950	7.868	10.136	15.660	13.063	15.702	17.725	17.660	
Via Suez (estimation)	97.5	88.6	94.3	95.4	96.6	65.3	72.3	78.7	82.8	← % in Total Imp. of Oil from East of Suez.
Northbound Shipments to U.K - (Suez Statistics)		5.920	8.136	10.337	13.820	15.770	18.127	20.542	19.688	

figures supplied by the Suez Canal were constantly higher than the figures which I estimated by roughly about 2 million tons. Such a difference can not be explained by Saudi oil shipments from the Gulf since total oil imports from Saudi Arabia in 1953-55 were very low, i.e., .227 mil. tons in 1953 and .376 mil. tons in 1955. It could be conceivable, however, that a portion of U.K. imports from Iraq were shipped from the southern Iraqi fields of Basra, Zubair and Rumaila (32) However, if my own estimation is relied upon we shall be able to find out with a good degree of reliability the minimum proportion of Middle East oil which must have come to the U.K. through the Suez Canal. Then in the light of Suez Canal statistics we may further suggest that the dependence of the U.K. on the Canal was greater than the proportions which I have estimated.

On this basis U.K. dependence on the Canal was as much as 97.5% and 96.6% of total oil imports from the Middle East in 1947 and 1951 respectively. In 1952 the tendency to substitute Iranian oil for imports from Iraq and Saudi Arabia decreased the dependence on the Suez Canal to only 65.3% of U.K's total oil imports of oil from Kuwait and the gradual return of

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(32) Rumaila came into service in 1954.

Iranian oil dependence on the Canal was once again rising. By 1955 82.75% of U.K's oil imports from the Middle East came through the Canal and the rest 17.25% were shipped from the Syrian and Lebanese ports. See also Table (33).

The Size of British Trade which Depended on the Suez Canal in 1955. (Estimation)

It has been shown in the analysis of this Chapter that the importance of the Canal to the British trade had increased considerably during the post-war period after declining in the 1930's. To estimate the size of British trade which used the Canal in 1955 we need to rely on intelligent guess work as no statistical data are available on this matter.(33) On the basis of general information, however, we may be able to venture some estimation by dividing the British-Eastern trade on the Canal into three categories.

First: trade which depended almost completely on the Suez Canal. That was British trade conducted with the

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(33) During the period 1869-1958, with the exception of oil and a few other principal commodities, the Suez Canal publications gave no information about the origin and the destination of commodities passing through the waterway.

Eastern coast of Africa (excluding the Southern region), Arabian and Persian ports, Mauritius and some other small islands in the Indian ocean, India, Pakistan, Ceylon, Burma, Malaya, Hong Kong and all other countries and islands of South East Asia. According to British statistics in 1955 Britain traded about 16% of her total exports and 15.5% of her total imports (by value) with this group of territories. Second: British trade which depended partly, but mainly, on the Suez Canal. That was the trade which Britain conducted with countries of the North East Coast of Asia, Japan and the Philippines. Trade in this category constituted only about 0.6% and 0.5% of the value of total imports and exports, respectively in 1955.

The third category includes British trade with Australasia which constituted 11.5% of total imports and 14.2% of total exports by value in 1955. The largest part of British-New Zealand trade-which formed 4.74% and 4.76% by value of total British imports and exports - was dependent on routes other than the Suez Canal. In 1955 New Zealand total traffic in the Canal added only 0.3% to the Australasian proportion of total Canal traffic. As regards trade with Australia, about 85-90% of the value of Britain's

imports therefrom came through the Canal in 1955. Suez Canal records indicate that about 90% of Australian shipments of wheat, wool, meat, fresh vegetables, fruits and other food stuffs had depended on the shortest route to the British and the European markets. In addition large quantities of ores and metals particularly zinc had passed through the Suez Canal. British imports from Australia, by value, formed 6.8% total imports and it may be estimated upon all information available to us that only about 1% of that proportion did not use the Suez Canal. A similar estimatio to the proportion of British exports to Australia which used the Canal can not be easily made. Suez Canal statistics had not specified how much of Australian shipments of wheat, meat or wool were consigned to Britain. They marked them as "mainly" going to Britain. Knowing the trade pattern between Australia and other European countries it was possible to make some rough approximation about amounts which were shipped to Britain from Australia via the Canal. In the case of North-South traffic to Australia there were much less information furnished by the publications of the Canal Company to indicate the exporting countries West of Suez. Nevertheless

examination of Australian shipping ad trade accounts with Britain and the rest of Europe, besides the information issued by the Suez Canal and the Panama Canal may enable us to suggest that roughly one third of British exports to Australia had used the Suez Canal in 1955. That would be about 3% of total value of British exports.

Now in order to avoid unnecessary complications in reaching a rough approximation for the value of British trade which used the Suez Canal, we may ignore the small figures included in the second category (above) as well as British-New Zealand trade. Thus we may estimate that about 19% and 21% of British exports and imports (by value) used the Suez Canal in 1955. In an article titled "Via Suez" which appeared in the Economist (4th August 1956) it was mentioned that "just under 25%" of British import and export trade in 1955 was "with countries normally reached via Suez."(34) This figure may be taken to indicate a sort of a "maximum" to the proportion of British trade which used the Canal in that year whereas the other figures reached above can be taken to indicate a "low" estimate. In this way we may conclude that something between fifth and fourth of

the British trade depended on the Suez Canal in 1955.

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(34) The Economist did not explain how the figure of 25% or a little under was arrived at. It is certain, however, that a fairly large proportion of export and import trade with Australasia was estimated to have depended on the Suez Canal.

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THE SUEZ CANAL AND THE TRENDS OF BRITISH TRADE TO AND FROM THE MIDDLE AND THE FAR EAST IN THE PERIOD 1854 - 1966.

PART III 1956 - 1966.

PART III

CHAPTER VII

THE SUEZ CRISIS (1956-57)

FROM THE DAY OF THE NATIONALISATION UNTIL THE CLOSURE OF THE CANAL.

1. BACKGROUND TO THE 1956-57 SUEZ CRISIS

It has been estimated in Chapter (6) that something between a fifth and fourth of the value of British trade depended on the Suez Canal in 1955. These figures may also be adopted for the pre-crisis period in 1956 without risking any significant change in their accuracy, however.

Furthermore, the outlook for the future in 1956 supported the view that more dependence on the Suez Canal was well within expectation. The British government was not prepared to join the European Common Market at the cost of limiting the Commonwealth trade. Eden, British Prime Minister, believed that "both for economic and political reasons the necessary solution is a wide area of trade agreements which comprises the British Commonwealth and Europe."(1) It is needless to emphasise the importance of this policy on the dependence of British trade on the Canal; we may only recall that the major part of this particular trade had been, and was still, conducted with Commonwealth countries East of Suez.

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(1) "Full Circle", Anthony Eden's Memoirs, p.337.

Most important, however, was the expected large increase in oil shipments in the Canal in the years after 1956. The British government had shown its intention to work for an annual rate of growth of 3%, an increase which implied a doubling of 1956 standard of living by 1985. On the assumption that an increase in the consumption of power at a rate of 0.6 - 0.7% would be required per each 1% rate of growth, about 429 mil. tons of coal-equivalent was estimated,(2) as the rate of fuel consumption to be expected in the U.K. in 1985. See also Table (34) which presents three other estimates made by the same authority in December 1955. Out of the figure of 429 mil. tons about 91 mil. long tons of oil(3) might be needed. Table (35) shows estimates of oil requirements in the U.K. between 1955 and 1985. The most striking fact that emerges from Table (35) is the high rate at which estimated U.K.

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(2) Estimation made by Dr. G.H. Daniel, Ministry of Fuel and Power in Paper presented to the Institution of Production [illegible] Engineers - London, December 1955.

(3) Roughly 1 ton oil products = 1.5 ton coal, and
1 ton oil crude = 1.4 ton coal

TABLE (34)

U.K. ESTIMATED TOTAL FUEL CONSUMPTION (Estimation made in 1955)
(mil. tons of Coal equivalent a year)

	"High" Estimates		"Low" Estimates
	(a)	(b)	(c)
(Actual) 1954	245	245	245
Estimated 1960	278	273	261
1970	342	326	291
1980	415	385	320
1985	458	418	332

(a) Assuming that national income increases by 3% per annum and that fuel consumption increases by 0.7% for every 1% increase in national income.

(b) As for (a) but assuming that fuel consumption increases by 0.6% for every 1% increase in national income.

(c) Assuming that national income increases at a lower rate arising from an increase in productivity of only 1.6% per annum - instead of 2.8% per annum in other estimates - and a small increase in population. Also assuming that fuel consumption increases by 0.6% for every 1% increase in income.

TABLE 35.

U.K. ESTIMATED OIL CONSUMPTION x (Estimation made in 1955)
Mil. Long Tons

Actual	1954	22.2
"	1955	25.0
Estimated	1960	40.0
	1970	61.0
	1980	82.0
	1985	91.0

x Petroleum products not used as Fuels are excluded.

oil needs were to grow between 1955 and 1970, i.e., 60% increase between 1955 and 1960, and 53% between 1960 and 1970. Conventional fuels would still count for a large portion of the growing needs but their importance, according to the estimation, would be declining relatively. Atomic energy was expected to provide an increasing portion in future fuel consumption in the U.K., particularly from 1975 onwards. Forty mil. tons of coal equivalent might be met by atomic energy.in 1975 and perhaps 94 mil. tons in 1985. Thus although consumption of atomic energy might be growing faster than the consumption of oil between 1975 and 1985 more reliance would still be placed on oil.(4)

Britain and the rest of Western Europe relied greatly and increasingly on the Middle East for their oil supply throughout the post-War period. The prospect of replacing this source in future with any

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(4) In 1956 O.E.E.C. estimated that about 1,200 mil. tons of coal equivalent would be required by the whole of Western Europe in 1975. Again it was anticipated that oil would be consumed at a faster rate than any other sort of fuel; 315 mil. tons would have to be met by the use of oil in 1975. O.E.E.C., Europe's Growing Needs of Energy - "How Can They Be Met?", 1956

other oil source was quite unfeasible. The Middle East oil reserves were vast and they were capable of very great expansion, much greater than in any other producing area in the world. Therefore the biggest contribution to future expanded needs, not only those of Western Europe but also of all the rest of non-Communist world, was of course expected from the Middle East where an immense expansion was foreseen. See also Table (36)

TABLE (36) x

POSSIBLE PATTERNS OF FREE WORLD OIL PRODUCTION TO MEET DEMAND.

Figures in Mil.Ton

	Actual 1955	Possible 1965	Possible 1975
U.S.A.	328	450	450
Canada	17	50	65
Mexico	13	25	30
Caribbean	119	190	225
Other W. Hem.	8	35	50
Middle East	159	400	900
Europe	9	20	30
Africa	-	10	20
S.E. Asia	18	50	80
Synthetic & Natural Gasoline	31	70	185
	702	1,300	2,035

Estimation made by D.C. Ion, "Oil Resources in the Next Half Century", Paper published by Institute of Petroleum 1956.

That forecast which laid so much reliance on possible oil supply from the Middle East, at least during the twenty years 1955-57, placed a tremendous dependence on all sea channels through which supply might be carried to West of Suez. The importance of the Suez Canal in particular was expected to grow considerably at least during the rest of the 1950's and the 1960's (5) because of the following reasons:

First, the prospect of placing more reliance upon Middle East pipelines by building new lines was regarded with pessimism. The post-war experience of Middle East oil companies in that particular field could not be regarded as successful as it has previously been thought,

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(5) Apparently the future efficiency of the Suez Canal after the 1960's was viewed with scepticism in in Britain. The Suez Canal Company's concession was to end in 1968 after which date the government of Egypt was to take over the waterway. Whether or not the Egyptians would be able to manage the affairs of the Canal was still to be proved. Yet, on several occasions hints were dropped by the company's officials (most probably instigated by self interests - see A. Wilson, the Suez Canal, p.95 about the company's attempts to extend the concession in the past) that a non-maritime nation like Egypt would be incapable of administering to the business of the greatest man-made waterway.

and no doubt was discouraging to any further schemes.(7)

Second, in 1956 work started in the Suez Canal to provide for vessels drawing 36 ft. to use the water way. Yet, on the other hand there were tankers on order with draught of over 40 ft. Thus it was expected that all projected large tankers would be unable to navigate the Canal, unless they were in ballast or lightly loaded, and would be making their homeward journey - i.e., from the Persian Gulf ports - in future via the Cape of Good Hope. Nevertheless, despite the economic advantages gained by employing larger size tankers there were likely to be some limitations upon the growth of their number in the near future. Depth of water and other shipping facilities at most of the world's receiving terminals, besides the existence of small number of suitable repair docks would confine the use of the largest

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(6) See discussion about pipelines of the Middle East in Cahpter 6.

tankers to a restricted number of routes. Hence it was very likely that the growth of the size of the tanker would not by itself affect the allotments of Middle East oil traffic between the Canal and the Cape route. In other words, improvements in the dimensions of the Canal might not always be parallel to the latest development in the size of the tanker but so might also be the case with most of the world's ports and repair docks. Thus a considerable portion of new tankers would still be ordered to suit most of the world's existing commercial routes and consequently the largest number of tankers would most probably be able to navigate the Canal. That estimation was fairly predicted by oil and tanker experts for the decade or so following 1956.

II. THE NATIONALISATION OF THE SUEZ CANAL COMPANY AND THE REACTION OF THE BRITISH GOVERNMENT.

On 26th July 1956 the Egyptian government announced its decision to nationalise the Suez Canal Company. The 1888 Constantinople Convention was accepted as a basic constitution for the future management of the affairs of the Suez Canal. Hence the freedom of navigation in the Canal was promised.(7) In his nationalisation speech the President of Egypt, President Gamal Abdel-Nasser, explained that his government's decision to nationalize the Canal Company was judicially justifiable on the basis of Egyptian sovereignty. Yet, he said, the decision was provoked by the attitude of the Western powers towards a loan which Egypt desperately needed for the finance of its development. The Egyptian government had appealed to the World Bank for a loan in order to build the "High Dam" which was regarded as indispensible to Egypt's economic development. But the World Bank "influenced by the U.S. and Britain"

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(7) Article I in the Nationalisation Act provided compensations to the shareholders on the basis of the closing quotations at Paris Stock Exchange on the day preceding the nationalisation (25th July 1956). This compensation however was only to be paid when all assets and properties of the company were fully surrendered to the State.

was reluctant to give Egypt any assistance. After a long course of negotiation the U.S. and Britain agreed to grant the foreign exchange necessary for the finance of the first stage of the High Dam and on this basis the World Bank offered some other part of the total cost of the project.(8) But the World Bank and the Americans, as it appeared to the Egyptian Giverrment, "were trying to impose conditions on their loan the acceptance of which would have subjected

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(8) Estimates of the total cost of the scheme varied but it was somewhere in the region of £1,350 mil., of which £450 mil. were required in foreign exchange. The first stage was to have been financed by an outright grant of £70 given by the U.S. (£56 mil.) and Britain (£14 mil.). Egypt was to provide labour and materials to an equivalent value. On this basis the World Bank offered £200 mil. necessary to continue the work after the first stage had been finished. The rest of the capital needed was to be given to the Egyptian government if the Bank was sufficiently satisfied with the state of the Egyptian economy and the development that was achieved.

Egypt once again to Western domination.(9) Egypt refused to bow to these powers and therefore they withdrew their offers of aid".(10) Egypt was determined, however, to build the High Dam. Thus Nasser "in the name of the Egyptian nation" decided to "restore back the Canal for Egypt" and to use its revenues for the finance of development. Nasser's decision was widely acclaimed in Egypt.

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(9) Western powers demanded that the Egyptians would give the High Dam priority over other projects. Here it seems that some hints were made about the rising proportion of the budget that Egypt devoted to military preparations - See Eden's Full Circle, p.420. It was also demanded from Egypt to refuse aid from communist sources. These demands were regarded in Egypt as a direct intervention in Egyptian affairs.

(10) The reason which the U.S. gave for its action was that the Egyptian economy was not functioning satisfactorily and that it was doubtful if Egypt would be able to carry out the project. There were in fact many other reasons than this. See "Dulles Over Sues" - Chapters 2 and 8 - by H. Finer. See also the Economist July 28th, 1956, p.295-297 for the effects of the withdrawal (the nationalization of the Canal was not known yet).

The nationalization of the Suez Canal Company was not accepted by the British Government, Anthony Eden, Prime Minister, for the following reasons: (11)

1. President Nasser's declaration that the revenues of the Suez Canal would be directed to serve Egyptian economic development aroused strong doubts that essential improvement projects in the Canal, which can only be met at considerable capital costs, might not be implemented properly, if at all. Egypt might also try to exploit her new monopolistic position by introducing a steep increase in Canal tolls to serve her internal needs. If these policies were carried out the trade and shipping interests of Britain, and other maritime nations would greatly suffer.

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(11) Based on information obtained from:

A. Eden, "Full Circle."
The Times - Daily Newspaper - London, during the period of the crisis - See in particular the issue of August 1st.
The Economist - issues appeared during the crisis
"Dulles Over Suez". By H. Finer.

2. During the period 1952-1956 the new Egyptian government had consistently disregarded the Security Council's resolution that Israeli ships should have freedom of passage through the Suez Canal. Such a precedent, in the opinion of the British government had shown that the Canal would not be isolated from the national policy of Egypt in future years. Britain's trade and shipping interests in the Canal were already vast and were likely to grow much more. The British government was not prepared to leave such interests under the control of the Egyptian government, or at the mercy of a man like Nasser who frankly declared his intentions to remove all sorts of foreign influence from all the Arab world.(12)

3. The Egyptian government's seizure of the Suez Canal company before the end of its concession represented a breach of an international agreement. By the act of nationalization the Egyptian government had

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(12) See Gamal Abd El-Nasser, The Philosophy of the Revolution, p.58-63., printed in Cairo, Egypt. Eden wrote in one of his telegrams after the Suez nationalisation "A man with Colonel Nasser's record could not be allowed to have his thumb on our windpipe". See A. Eden, Full Circle, p.337.

shown a complete disregard for an agreement which had been reached with the Canal company in June 1956. This matter was quite serious to the British government. In the post-war period British troops were withdrawn from many countries in the Middle East (including Egypt) and in Asia. The British government was also preparing to give independence to the remaining parts of the Empire. However, where British interests still remained the British government relied upon bilateral agreements with the territory concerned. For example, Britain had defence agreements with Egypt, Iraq and Jordan in the Middle East area. The Anglo-Egyptian agreement concerned the defence of the Suez Canal. Besides British oil intersts in the Persian Gulf area were dependent on "agreements". The British government, therefore, saw that if Egypt were allowed to succeed in taking the Canal through a unilateral act and in defiance of an international agreement, other countries would sooner or later follow its example. Nasser's influence was spreading not only among Arabs but also among the Moslem nations of Asia and Africa, which formed a considerable part of the old British Colonial Empire. Therefore, and irrespective of the legality, or illegality, of the Egyptian act, the British government was not ready

to allow Egypt to gain the fruits which might be gained by the nationalization of the Canal.

These were the main points which really concerned the British government. Besides, the government expressed doubts about the Egyptian technical and administrative ability to manage the affairs of the Suez Canal. Doubts were also expressed that the Egyptian government might not be capable financially of paying compensations to the shareholders even if that was promised and the British government was not prepared to accept unless a satisfactory solution to the principal crisis was found. However it is important at this point to emphasise that the government preferred to handle the issue of the Suez nationalization through broader questions such as the "sanctity of international agreements" and the future of British influence and interests in the East. This attitude had certainly placed on the British government such pressure that an "easy" solution to the Suez problem of itself, for instance a new agreement with the Egyptian government, was not feasible. Consequently, it is quite important to emphasise that the price which Britain paid during the nine months of the Suez crisis, and also after, was not merely for the safeguarding of the British

interests in the Canal but also, and probably mainly, for keeping the British authority and the British interests in the Middle East as well as in some other parts of Asia and Africa.

In dealing with the situation the British government preferred that action should be taken in co-operation with the U.S., France and the rest of the N.A.T.O. countries as well as other maritime nations concerned. In 1955, about three quarters of the Canal traffic (by flag) belonged to the N.A.T.O countries - Britain alone had 28.3%. The British government was conscious that a close co-operation with the U.S. was particularly needed, however. There had been several political reasons behind such a policy but we may concern ourselves here only with the direct economic reason. U.S. oil supply, tankers, and financial assistance (most probably) would be needed if the Canal were closed under emergency. To explain this point we may have to refer in some details to the nature of the problem which would have to be faced in case of a closure of the Suez Canal. In 1956, oil shipments from the Persian Gulf to Western Europe via the Canal were conducted approximately at the rate of 60 mil. tons a year - an increase of about 17.5% above the corresponding

figure of 1955. The British share was nearly as much as one third of these amounts. Now, supposing that the Cape route was used instead of the Canal and that the same volume of tanker tonnage would be available in either way. Given a certain period of time, only about half the amount of oil carried from the Persian Gulf to Western Europe via Suez would be received via the Cape route since this is roughly twice as long. Thus, to ship Western Europe's oil needs from the Persian Gulf via the Cape, instead of Suez, at the rate of 60 mil. tons per year (1956) would take up roughly as much tanker tonnage as that required for carrying 120 mil. tons a year via Suez. To recruit such an extra amount of tanker tonnage was virtually impossible in 1956. The world's tanker tonnage, roughly adjusted to carry oil to various destinations via "normal" sea routes, was almost fully employed. It was therefore out of the question to re-route all of Western Europe's Canal oil round the Cape. Only about half of these amounts, i.e., 30 mil. tons per year, would possibly be received via the longer route. It must be emphasised, however, that the significance of this argument was dependent on the length of the period in which passage through the Canal might be obstructed. The shorter this period would be than one year the less important would be

the consequences of using the longer route. If the Canal were to be closed for a month or two for instance, the delay in shipments and the resulting decrease in oil supply might be easily met from home or European reserves. A temporary solution might even be found for the problem of the shortage in tanker tonnage.

The U.S.A. was about the only country which could help Britain and the rest of Western Europe if the Suez Canal was closed for some time. In 1956 the U.S. was buying oil from the Middle East at approximately a rate of 13 mil. tons per year; 5 mil. tons from pipeline terminals at Eastern Mediterranean, and the rest was shipped from Persian Gulf ports. The surplus capacity of the U.S., which was normally controlled under government regulations, had been variously estimated in 1956 at between 35 mil. tons and 60 mil. tons per annum. Thus, if decided, the U.S. was in a position to counter the Suez threat by increasing its oil production and by placing under the services of Western European countries the tanker fleet engaged in carrying its share of Middle East oil. Such a solution would have produced a considerable saving in tanker tonnage which could have been of a significant help in case of a stoppage of navigation in the Canal.

For example, London is only 3,300 n. miles from the Eastern Mediterranean pipeline terminals, whereas New York is 5,200 n. miles. Thus American tankers which carried 5 mil. tons to New York from Eastern Mediterranean terminals could have carried roughly about 8.5 mil. tons to London from the same source. Similarly tankers which carried oil to the East coast of the U.S. from the Persian Gulf via the Cape and via Suez, would carry larger volumes of oil to Western Europe from the same source and via the same routes. Thus in case of a Suez closure they would be more advantageous to Western Europe. Yet, most of the U.S. imports from the Persian Gulf came via the Canal. Besides, the voyage from U.S.' east coast to the Persian Gulf, via Suez, was about three quarters of the voyage from the same source to Western Europe via the Cape. Thus given a certain period of time, roughly about three quarters of what the U.S. would have normally received from the Persian Gulf, could have been made available to Western Europe if the Suez route was closed. In fact a maximum use of the capacity of these American tankers could have been obtained by employing them for carrying oil from U.S' east coast to Western Europe. This voyage across the Atlantic was shorter by 8,300 n. miles (London is taken as an example) from the alternative

voyage (i.e. Persian Gulf-London via Cape), and only about 60% of the actual voyage from the Persian Gulf to U.S' east coast via Suez. Thus, roughly, the tanker tonnage used in 1956 in the actual voyage to the U.S. for sending about 9 mil. tons via Suez could have been used for carrying something around 14 mil. tons of American oil to Western Europe (given a certain period of time). This solution was obviously dependent upon the assumed ability of the U.S. to increase its local production of oil by 30-60 mil. tons a year.

In addition to these possible solutions the U.S. government was in a position to give further help to Western European countries, in case of a Canal closure, by taking out tankers from its own reserve fleet and, possibly also, from tankers engaged in American coastal trade. After the nationalization of the Canal and with the expectation of troubles, experts in Britain estimated that the U.S. was in a position to fill in the gap which might be created in Western Europe's oil supply if the Suez route was closed. On the basis of the above analysis and the assumptions that underlay it, that estimation was sufficiently reasonable. However, scepticism was expressed that the oil problem which Western Europe might face would be quite critical if the pipelines

at the Eastern Mediterranean were to be closed as well as the Suez Canal.[13]

With the exception of France,[14] British attempts to co-operate with the U.S. and other maritime nations over Suez did not lead, however, to any fruitful results because of differences in economic and political interests. The U.S. excluded the use of force, which the British and the French strongly recommended as a final step, until economic and political pressure over Egypt had completely failed. Later the British government was disappointed as the U.S. government declined to carry out effectively its suggested policy of economic pressure over Egypt. One example may be cited here concerned the U.S. government's unwillingness, or inability, to hold American owned ships from paying Canal dues to the new Egyptian management, a

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(13) See the Economist, Sept. 22, 1956, p.983-984. See also Petroleum Press Service, Sept.,1956, p.318-320.

(14) France was the only other Western country which had interests in the Suez Canal and in the Middle East area similar to those of Britain; about half the shares of the Canal company, a considerable stake in the Middle East oil industry and French colonies in Africa neighbouring Egypt. See A. Eden, Full Circle, about co-operation with the French government in 1956.

policy which was adopted by Britain, France, and some other allies.(15) Besides, the U.S. government showed itself to be totally unprepared to carry out too far the suggestion of the British and the French which called for the internationalisation of the Suez Canal. This was mainly due to the U.S' absolute control of the affairs of another international waterway: Panama Canal.(16) The divergence between the British and French interests, on the one hand, and the interests of the U.S. and other maritime nations, on the other hand was most evident after the failure of the first Suez Users' Conference which was held in London during the third week of August 1956. The resolution which was adopted in that Conference consisted of two points; first, "the operation of the Canal should be isolated from the influence of politics of any nation; and second, that to enable this to be done, there should be established, under an international convention to which Egypt would be a party, a body charged with the operation, maintenance and the development of the Canal." Egypt

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(15) A. Eden, Full Circle, p.438-39.

(16) See H. Finer, Dulles Over Suez, about this particular point and its influence upon the American policy during the Suez crisis.

rejected that resolution because she considered that the existence of any international body as suggested by the Conference to control the affairs of the Canal would be a derogation from Egyptian sovereignty. (17) To prevent a possible war at that end the U.S. Secretary of State, John Foster Dulles, introduced the scheme of the "Suez Canal Users' Association" (S.C.U.A). Dulles suggested that the Canal users should join together, provide the pilots, collect dues and undertake themselves all other administrative, organizational and technical services needed for the Suez Canal. A second Conference was held in London therefore to establish the S.C.U.A.

Ironically the S.C.U.A. was based on the first Conference proposals which were already rejected by Egypt. Meanwhile Dulles made it clear that he had ruled out the use of force if the Egyptians refused to co-operate with the S.C.U.A's staff or prevent them entirely from doing their job in the Canal. If that happened (and in fact it was definitely going to happen) Dulles suggested that, for the punishment of Egypt, members of the Association should divert

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(17) See Exchange of correspondence between the Suez Committee and the President of Egypt regarding the Suez Canal., England-Foreign Office. London, 1956.

their traffic to the Cape route. The S.C.U.A.scheme was supported with a promise that the U.S. would fill in any gap in oil supply to Western Europe if tankers were to be diverted around the Cape. As the problem of finding dollars to buy American oil would not be less difficult than finding oil, Dulles supplemented his promise by adding that the Export-Import Bank would "stand ready to consider favourably applications by European countries for loans to finance imports of oil from the U.S." The offer although not yet a firm one meant that the U.S. would commit itself to lending Britain, France and the rest of Western Europe about $500 mil. per annum. From the very beginning of the crisis co-operation with the U.S. over the question of oil was certainly important. Yet it is beyond doubt that the British government was thinking of substituting American for Middle East oil if a military clash with Egypt led to the diversion of traffic around the Cape. In this case the British government had most probably estimated that the Canal would be closed only for a short period of time, probably three months. The price of substituting American oil for the cheaper oil of the Middle East and of giving payments in dollars instead of sterling for a short period of time was probably accepted as

a necessary price for restoring control over the Canal and keeping Western authority in the area. But to divert traffic around the Cape and to accept American oil and dollar loans for an indefinite period of time would have mounted to become a burdensome pressure on the British economy. American oil could have come only at higher prices and that would naturally have raised prices and led to the introduction of some undesirable monetary and fiscal measures to correct the situation which had only started to show definite signs of improvement since the War. Also a large American loan would have weakened the sterling position and enlarged the deficit in the balance of payments with the dollar area. (18)

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(18) A. Eden wrote about Dulles' scheme and offer of help, saying, "It was an ambitious plan and meant sending round the Cape of Good Hope about half the one and a half million barrels of oil a day which usually passed through the Canal. The other half of the normal Western consumption of Canal borne oil was to be obtained from expanded production in the Gulf of Mexico and the Caribbean.

The plan had two unwelcome implications for us. First, friendly countries in the Middle East would have to be asked, while the emergency lasted, to cut back their oil production, though their stability largely depended on its revenues. Secondly, Britain would have to spend many dollars to replace the supplies by Gulf and Caribbean oil. Even if we were granted a loan from the Export-Import Bank to finance this oil transaction, as had been promised, that loan would eventually have to be repaid in dollars and with interest. Since we and the French were not paying dues to Nasser and did not intend to do so, to send our oil round the Cape would injure us more than Nasser. The Cabinet decided against this project as an immediate means of pressure against Egypt.", A. Eden, Full Circle.

The rest of the eighteen powers which shared in the Second London Conference were certainly divided not only on the S.C.U.A. scheme but also on the way to end the crisis. Sweden, Norway, Denmark, Italy, the Netherlands, Spain, Iran and Pakistan and Japan declared in one way or another their opposition to the S.C.U.A's scheme. They were ready to submit the dispute to the U.N. or sign a new agreement with Egypt to end the crisis. These countries had become worried about their own interests in the Canal and/or about their trade and political relations with Egypt and other Arab countries.

Thus out of the twenty two nations which attended the first Conference in London,(19) only six countries were still officially on the side of Britain and France. These were Australia, West Germany, New Zealand, Ethiopia, Portugal, Turkey. Only the first two of these nations had some significant

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(19) Altogether the nations which attended the first London Conference numbered twenty two (Egypt and Greece refused the British government's invitation) and their traffic, by flag in the Canal represented approximately 95% of total traffic. India, U.S.S.R., Indonesia and Ceylon refused to vote in favour of the resolution which ended the work of the first Conference.

interests in the Suez Canal.

The continuation of the Suez dispute without any definite hope to reach a satisfactory end was having a serious effect upon the British economy. The military measures which the government took after the first week of the dispute consisted of recalling some of the reserves, delaying the release of conscripts, moving some British forces from Britain, Germany, and from the Far East to the Middle East, and requisitioning a number of ships from the commercial fleet. By late August the number of reservists who had been recalled amounted to about 20,000, quarter of the size of force which was stationed in the Canal zone before evacuation started in 1954. The withdrawal of these workers from their job was certainly causing some disorganization in their firms. The number of ships requisitioned reached about 60 medium sized tramp ships, comprising in all perhaps one-fifth of total tramp tonnage.(20) The effect of this requisition was to squeeze the needs of the shippers but it did not lead immediately to any general rise in freight rates. Movement of troops also necessitated some extra expenses and created pressure on private air

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(20) The Banker, September 1956, p.540.

charter companies. Apart from the cost to the economy these measures were costing the British government about £1 mil. a week.(21)

The implications of the British government policy for market prices were sufficiently clear. In the first week of the crisis when war speculations were stimulated by the tough line which the government took prices rose sharply as they usually do when war clouds gather. The rise was particularly steep in the prices of the Canal borne commodities such as tin, copper, rubber and wool. Between July 26 and the end of the second week of September tin was higher by £64 a ton (8.4%), rubber by 2 d. a lb. (0.7%), copper by £22 a ton (o.7%) and future wool contracts (Dec.) by 15½d. per lb. (13%).(22) Prices of common Indian tea were also rising in London market despite the increased supply on North India during August.

During the third week of September Dulles' S.C.U.A. project was broached and preparations were made for the Second London Conference. It seems that

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(21) The Banker, November 1956, p.659

(22) The price of copper was partly affected by African miners' strike in Northern Rhodesia.

this move aroused expectations that the Suez crisis was going to be dragged on for some time before any serious course of action might be considered. As a result current commodity prices fell slightly. Future prices were yet still rising, indicating that pessimism still influenced the general course of events. For example, in October/November raw jute sales from Pakistan to Europe which were conducted at £88 per ton c.i.f. before the crisis, fetched £10 premium per ton during September.(23)

Meanwhile the same uncertainties and pessimistic expectations were naturally having a general depressing effect on stock market prices. The index of oil share prices in London Stock Exchange (1936 - 38 = 100) stood at 380.4% on July 23 recorded a decrease of 19 to 19.4 points during the weeks between July 26 and October 29. Western Hemisphere oil shares were, however, rising in prices in expectation of better business and so also were shipping companies shares for the same reason.(24)

During the first six or seven weeks of the Suez dispute two incidents were to throw doubts on the

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(23) See The Economist, Vol.180, 1956, p.987.

(24) The Economist, Vol. 180, 1956, p.988.

possibility of making the passage through the Canal without risking a considerable delay. The first was when shipping companies were advised by the government to continue to pay their Canal dues into the account of the Suez Canal company in London, and not to the new Egyptian authority. If the latter attempted to exact payments British shipowners were to re-route their ships round the Cape. However this incident passed almost without any effect as the Egyptian authority decided to overlook the matter until the dispute was over.

The second incident happened when the nationalized company attempted to paralyse the passage through the Canal by inviting the non-Egyptian pilots who accounted for about 4/5ths of the total staff to choose between remaining under its authority or joining the new management. This requirement was directed at 107 pilots who were still performing their job in the waterway. Meanwhile 58 pilots (the rest of the non-Egyptian pilots) who were on holidays during the dispute were instructed by the company not to return to Egypt.

Nevertheless the purpose of the company was foiled when the Egyptian authority made it clear that nobody was to resign his job in the Canal without a month's notice. Meanwhile, new pilots

were being recruited from all over the world to replace even those who wished to remain with the Canal company. During this pilot crisis some leading shipping firms, such as the P & O and the Orient Lines, thought it wiser to re-route some of their cargo and passenger liners round the Cape. Other shipping firms took out insurance against possible delay in making the journey via the Canal. The pilot crisis was gradually overcome during September and October when the new recruits with Egyptian and friendly European pilots managed to keep the Canal traffic running smoothly. Such a success had certainly restored confidence in the Canal and prevented the volume of traffic diverted to the Cape route from reaching any serious level.

The diversion of some traffic around the Cape route was partly stimulated by the rise in the war risk insurance rates on shipments for the Suez area. During September these had been raised in two stages by 5s.per £100. Yet against this factor there was an extra cost involved when obtaining bunkering fuel from Capetown instead of Aden. During the period July 26 to October 22 fuel oil was 34/6d. per long ton dearer in Capetown than at Aden (i.e. 186/6d against 152/-) and diesel oil was also dearer by 33/6d. per ton (i.e. 266/- against 232/6d.).

In the last week of October fuel oil had become 36/- per ton dearer in Capetown than at Aden and diesel oil was 35/- per ton dearer.(25)

The main factor which imposed a limit over diversion of traffic around the Cape was the cost of spending more days at sea. To quote an example on this point from The Economist (September 22, 1956), "a tramp ship belonging to "Silver Line" has been chartered to take about 8,000 tons of sugar from Britain to Port Sudan with the option to the ship-owner to go round (the Cape) if necessary. If that option is exercised and an extra 30 days taken for the voyage, the freight charge will be nearly £15,000 higher". However, that was an extreme case when the saving of distance via Suez was almost at a maximum. To Australia where the journey around the Cape took only one or two days longer, the diversion of some liners from the Canal was not followed by any change in freight rates or passenger rates. Yet the re-routing of some Australian liners was one of the reasons behind the increase in freight rates on the journey to India and the rest of the Far East by 15%.

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(25) Spot prices quoted by Shell Petroleum Company and published monthly in "Petroleum Press Service".

Such a surcharge could not have any serious effect on British trade because it was maintained only for two weeks.

On September 26 the British and the French governments referred the dispute with Egypt over the Suez Canal to the U.N. On October 13 the U.N. Security Council debated an Anglo-French resolution which consisted of two parts. The first part laid down six principles which would form a basis for any settlement of the Suez question.(26)

The second part declared that the proposals of the eighteen powers of London Conference (i.e. international control over the Canal) corresponded to the requirements of the six principles, and invited Egypt

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(26) These principles were to guarantee that: (1) there should be free and open transit through the Canal without discrimination; (2) the sovereignty of Egypt should be respected; (3) the operation of the Canal should be insulated from the politics of any country; (4) the manner of fixing tolls and charges should be decided by agreement between Egypt and the users; (5) a fair proportion of dues should be alloted to development. The sixth principle stated that in case of disputes, unresolved affairs between the Suez Canal company and the Egyptian government should be settled by arbitration.

to put forward her proposals to give effect to them. The first part of the resolution was adopted unanimously by the Security Council and the second part, which the British and the French considered most important and vital to any satisfactory settlement of the dispute, was vetoed by the U.S.S.R.

The agreement reached on the six principles was unduly greeted with optimism in Britain as well as in other parts of the world. Thus while business in the Suez Canal began to come back to normal the British and the French governments prepared to regain control over the waterway by force. On October 31 the British and the French joined in an attempt to invade the Suez Canal zone. It was said then that the invasion was undertaken to protect the vital route from the fighting which broke out between Israel and Egypt in Sinai on October 29.

The military plan failed to achieve its purpose mainly because the U.S. took action both directly and at the U.N. to stop it. The U.S.S.R. threatened to intervene in the dispute and threw out strong hints that atomic weapons might be used. Oil pipelines from Iraq to Syrian and Lebanese ports ceased to function as a result of a deliberate action by the

Arab nationalists who stood on the side of Egypt. Meanwhile, the military operation itself was not going as smoothly as it was planned, partly as a result of blocking the Suez Canal. On November 6 the fighting was stopped.

CHAPTER VIII

THE SUEZ CANAL CLOSURE AND ITS EFFECT ON BRITISH TRADE AND BALANCE OF PAYMENTS. 1956 - 1957.

Maintenance of Commodity Supplies during the Suez Canal Closure, November 1956-April 1957.

(a) Oil.

It has been explained that the closure of the Suez Canal while the world tanker fleet was almost fully employed meant that oil supplies could not be maintained from the same sources at the same rates. The stoppage of the I.P.C. pipelines made the difficult position still worse. Only 25% of the Iraqi oil which was carried to Europe via Syria and Lebanon could now be obtained, using the same amount of tanker tonnage, via the Cape route.(1) The O.E.E.C. estimated that maintaining full supplies for Europe by re-routing round the Cape oil which was normally carried via Suez and I.P.C. pipelines would have required an 80% increase in the tanker capacity serving Europe.

A reference has already been made to the necessary re-arrangements estimated by oil companies to maintain

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(1) What is meant here is that a tanker transferred to the Cape route could only transport from the Persian Gulf to Europe about 25% of the volume which it normally carried from Syrian and Lebanese ports. Practically no oil from northern Iraq could be moved to "Fao" at the Persian Gulf. Estimation of the figure "25%" by O.E.E.C. See "Europe's Need for Oil", p.23.

oil supplies to Europe in the event of actual disruption of the Suez Canal and the I.P.C. It remains for us now to see how these plans were carried out during the actual emergency.

Theoretical re-arrangements required to maintain full supplies of oil to Europe assumed that the U.S. oil companies would increase their production and co-ordinate their tanker fleet with that of Europe in order to minimize the loss of the Suez Canal and other transit facilities in the Middle East. Yet, dissatisfied with the Anglo-French intervention in Suez, the U.S. government decided to suspend the work of the M.E.E.C. and all other precautionary measures previously drawn up to help Europe. Such a policy was intended as a sort of economic, as well as political, pressure on Britain and France until they had decided to withdraw their forces from the Suez zone. November 1956 was therefore the worst month in the Suez crisis. Britain's crude oil imports from the Middle East and from other supply sources in the world fell by about 40% from the level of October 1956.

Once the British and French governments decided to withdraw their troops from the Suez area the task

of clearing the Canal began. Three to nine months were estimated for the completion of this work but it took only about five months. A similar period was spent in restoring the full capacity of the I.P.C. pipeline system.

Following the decision of the British and the French governments the U.S. government allowed the work of the M.E.E.C.(2) to be re-activated on the 3rd of December. By the end of the first week of December programmes were drawn up and U.S. oil companies began to co-operate with one another and with foreign companies to implement the complex process of exchanges of oil in order to ensure the best over-all use of available tanker tonnage.

During the months December 1956 to May 1957 Middle East oil shipments to the U.S. and Canada had been gradually reduced to very small amounts and were substituted by shipments from the U.S. Gulf. Europe therefore managed to obtain the share of the U.S. in the Tapline, about .5 mil. tons a month, above its

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(2) The Middle East Emergency Committee "M.E.E.C", a Committee that worked under the supervision of the government of the U.S. - from 10th of August 1956 - and on which were represented American oil companies having foreign oil interests. It was authorised to collect information about the oil situation, to prepare plans and advise in the event of a substantial Middle East transport crisis.

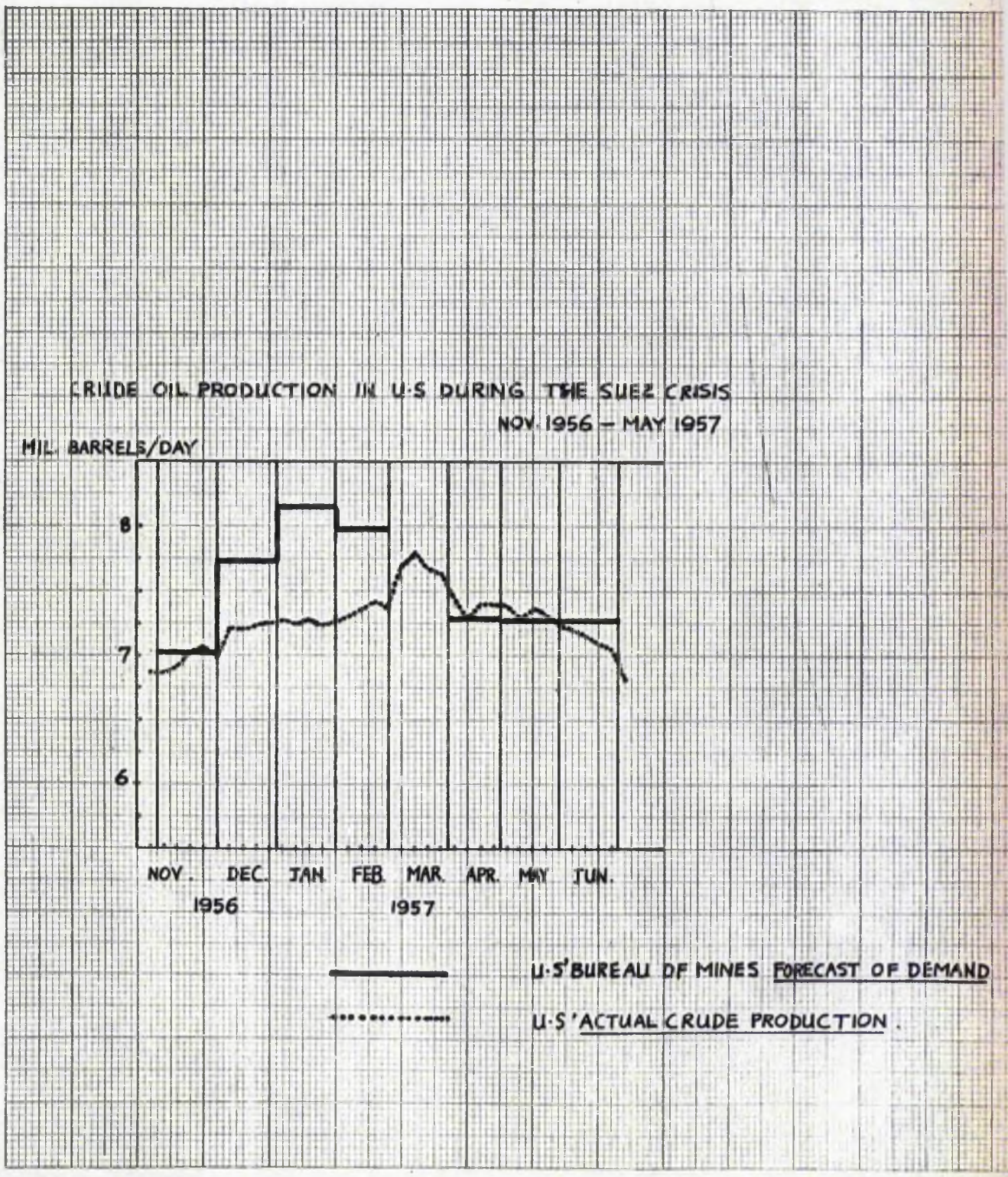
usual share of .8 mil. tons per month. Tanker tonnage which was employed before the crisis in carrying oil from the Persian Gulf to the U.S. and other Western Hemisphere countries was also made available to Europe. Besides some oil which was normally shipped from the Caribbean to the U.S. east coast was replaced by American oil and was exported to Europe. Finally the U.S. government reactivated some 18 tankers from the "mothball fleet", and lifted load line limitations of coastal tankers so that an increase of about 3% in their total capacity was achieved and was added to the fleet employed in the international trade.

The American oil companies welcomed the increase in exports to Europe since it reduced their oil stocks which stood at about 283 mil. barrels (51.525 mil. long tons) by the end of October 1956. Yet, there was some dissatisfaction because Europe's requirements consisted mainly of crude petroleum rather than gasoline. Although, by that time, consumption of gasoline was rationed in Europe its imports from the U.S. were checked by two factors. First, there was the desire to minimize the dollar costs of buying American oil during the crisis. Second, there was the need to use available tanker tonnage in carrying crude oil to European refineries in order to maintain the level of their activities.

The Independent Refiners Association of the U.S. protested against supplying Europe with its needs of crude and forgetting about the existing high supply of gasoline. It can not be determined however how far this attitude had affected exports of crude oil to Europe during the crisis.

During the three months December 1956-February 1957 U.S. crude oil production increased at a rate which was much slower than that estimated by different authorities as necessary for meeting the requirements of the American and the European markets. Diagram (44) illustrates the gap between U.S. actual crude production and the forecast of demand estimated by U.S. Bureau o f Mines. Two main factors affected the production policy in the U.S. producing areas: first, the fear that production might be increased before existing oil stocks had been substantially reduced, and second, limitations imposed by the internal transport system. In brief that was designed, approximately, to meet the normal requirements of the internal and the external markets, and thus it was difficult to expand its capacity flexibly with the emergence of some exceptional circumstances.

DIAGRAM(44) :


CRUDE OIL PRODUCTION IN U·S DURING THE SUEZ CRISIS
NOV. 1956 – MAY 1957
MIL. BARRELS/DAY
8
7
6
NOV.
DEC.
JAN.
FEB.
MAR.
APR.
MAY
JUN.
1956
1957
U·S'BUREAU OF MINES FORECAST OF DEMAND
U·S'ACTUAL CRUDE PRODUCTION.

Imports of crude petroleum from the U.S. during the closure of the Suez Canal are shown in Table (37) and in Diagram (45). They grew from nil in October 1956 to 17.580 mil. gallons in November and then to 112.187 mil. gallons in the following month when the U.S. government resumed co-operation with Britain and other Europeans to solve their oil problem. Yet, the high level of imports of U.S. crude in December, compared with January and February 1957, was due to the availability of a substantial level of crude oil stocks as well as sufficient tanker tonnage at the U.S. Gulf ports. For January and February, some significant relation can be observed by comparing the level of U.S. crude production (Diagram 44) and the level of British crude imports therefrom.

In addition to the crude imported from the U.S. during the emergency increasing quantities were obtained from the Caribbean area, and some other Western Hemisphere countries. Thus during the six months November 1956-April 1957 Britain's crude imports from Western Hemisphere countries (including U.S) increased from 117.597 mil. gallons to 317.132 mil. gallons - about 2.7 times.

DIAGRAM (45).

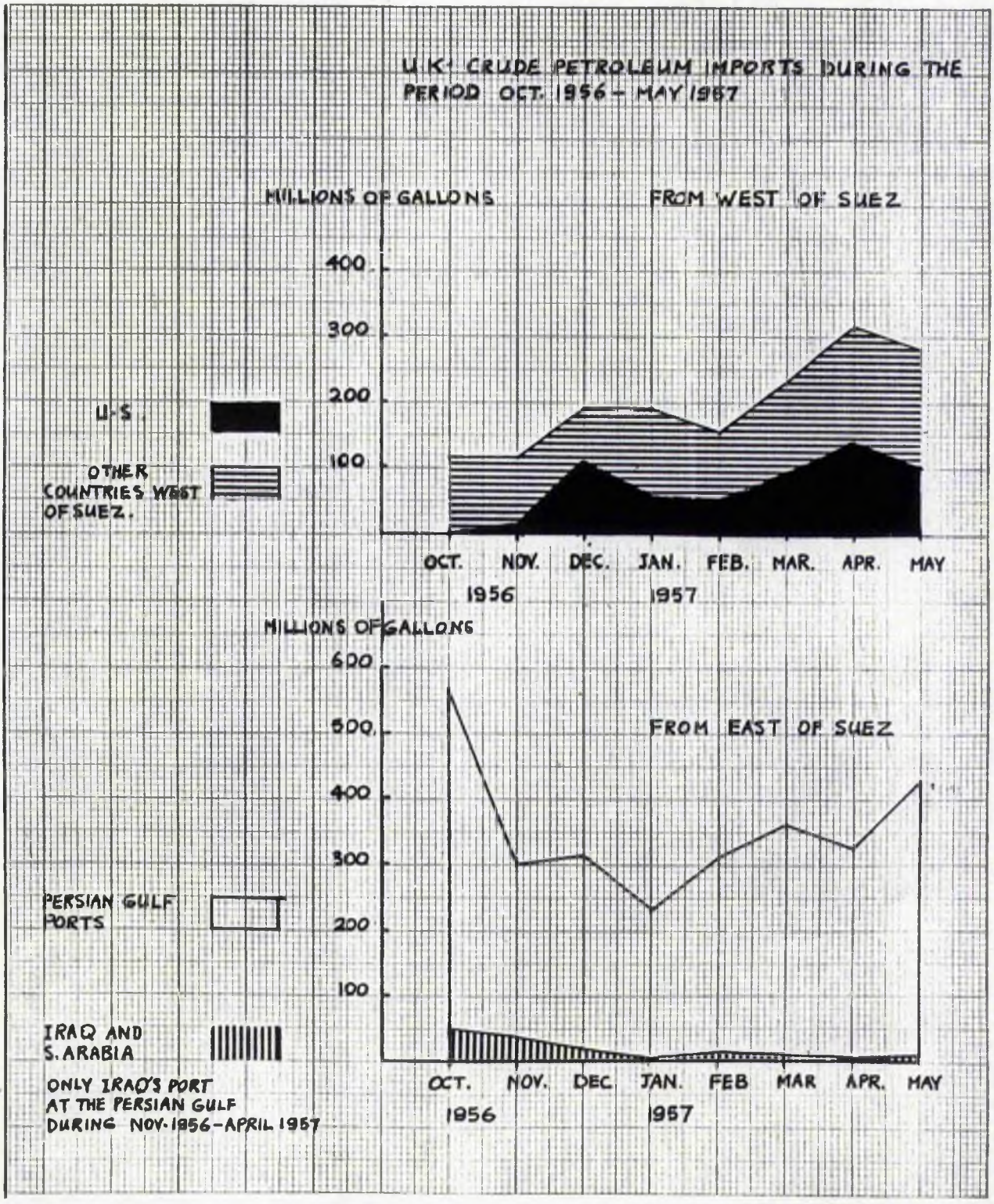

U.K. CRUDE PETROLEUM IMPORTS DURING THE PERIOD OCT. 1956 – MAY 1957
MILLIONS OF GALLONS
FROM WEST OF SUEZ
400
300
200
100
U.S.
OTHER COUNTRIES WEST OF SUEZ.
OCT. NOV. DEC. JAN. FEB. MAR. APR. MAY
1956
1957
MILLIONS OF GALLONS
600
500
400
300
200
100
FROM EAST OF SUEZ
PERSIAN GULF PORTS
IRAQ AND S. ARABIA
ONLY IRAQ'S PORT AT THE PERSIAN GULF DURING NOV. 1956 – APRIL 1957
OCT. NOV. DEC. JAN. FEB MAR APR. MAY
1956
1957

TABLE (37)

CRUDE OIL IMPORTS INTO THE U.K. BETWEEN JULY 1955 and JULY 1957

All Figures in Millions of Gallons

	Jan.	Feb.	Mar.	Apr.	May	June	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
1955												
From Middle East (a)							480.8	533.0	470.3	472.8	510.3	509.8
" W. Hemisphere (b)							115.6	123.8	119.0	113.9	58.1	126.3
(U.S.)							1.5	3.3	-	2.3	-	2.5
Total Imports (c)							596.4	656.8	589.3	586.7	568.4	636.1
1956.												
From Middle East (a)	491.8	559.8	511.7	565.5	578.9	567.3	587.3	694.8	502.5	568.5	301.5	315.3
" W. Hemisphere (b)	106.1	80.6	86.6	97.1	99.8	94.8	76.3	106.7	87.6	116.1	117.6	192.5
(U.S.)	2.3	-	2.2	-	2.3	0.2	.8	2.0	2.7	-	17.6	112.2
Total Imports (c)	597.9	640.4	598.3	662.6	678.7	662.1	663.6	801.5	590.1	684.6	419.1	507.8
1957												
From Middle East (a)	234.1	310.8	362.2	329.1	430.6	531.2	632.8					
" W. Hemisphere (b)	190.3	154.1	232.9	317.1	282.7	109.8	140.2					
(U.S.)	61.3	52.4	95.1	140.5	103.2	15.1	6.7					
Total Imports (c)	424.4	464.9	595.1	647.2	713.3	641.0	773.0					

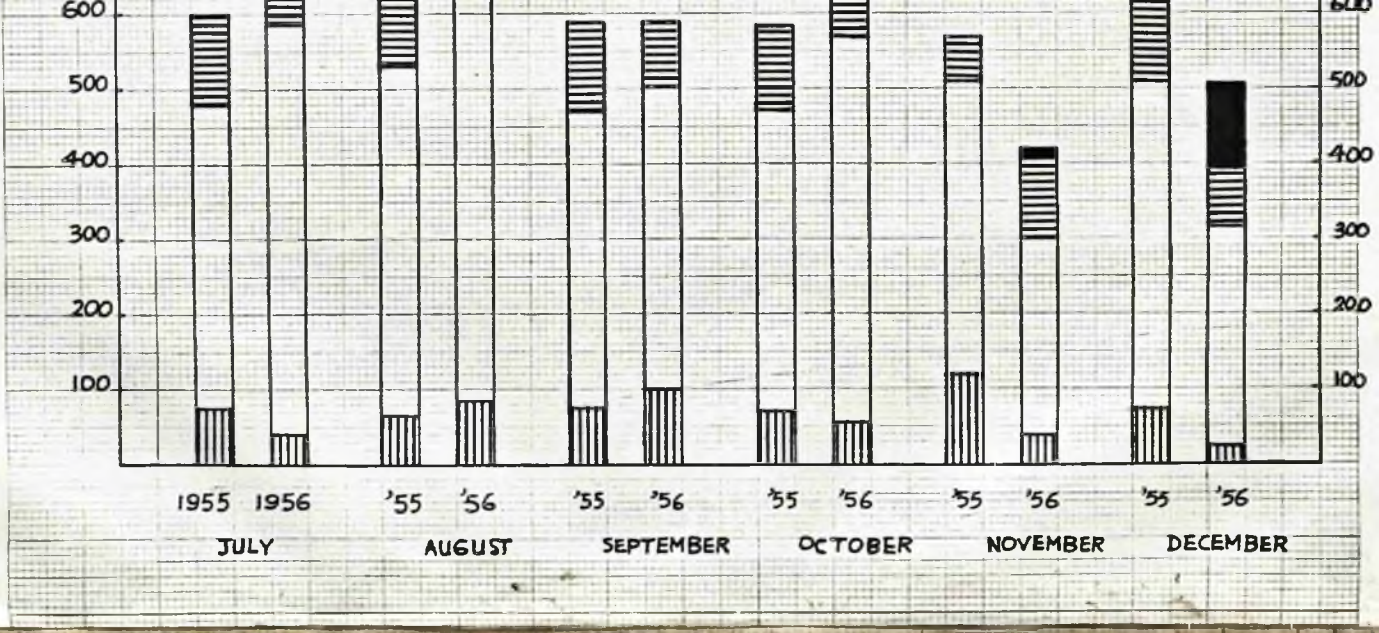
(a) Including small quantities which come sometimes from the Far East.

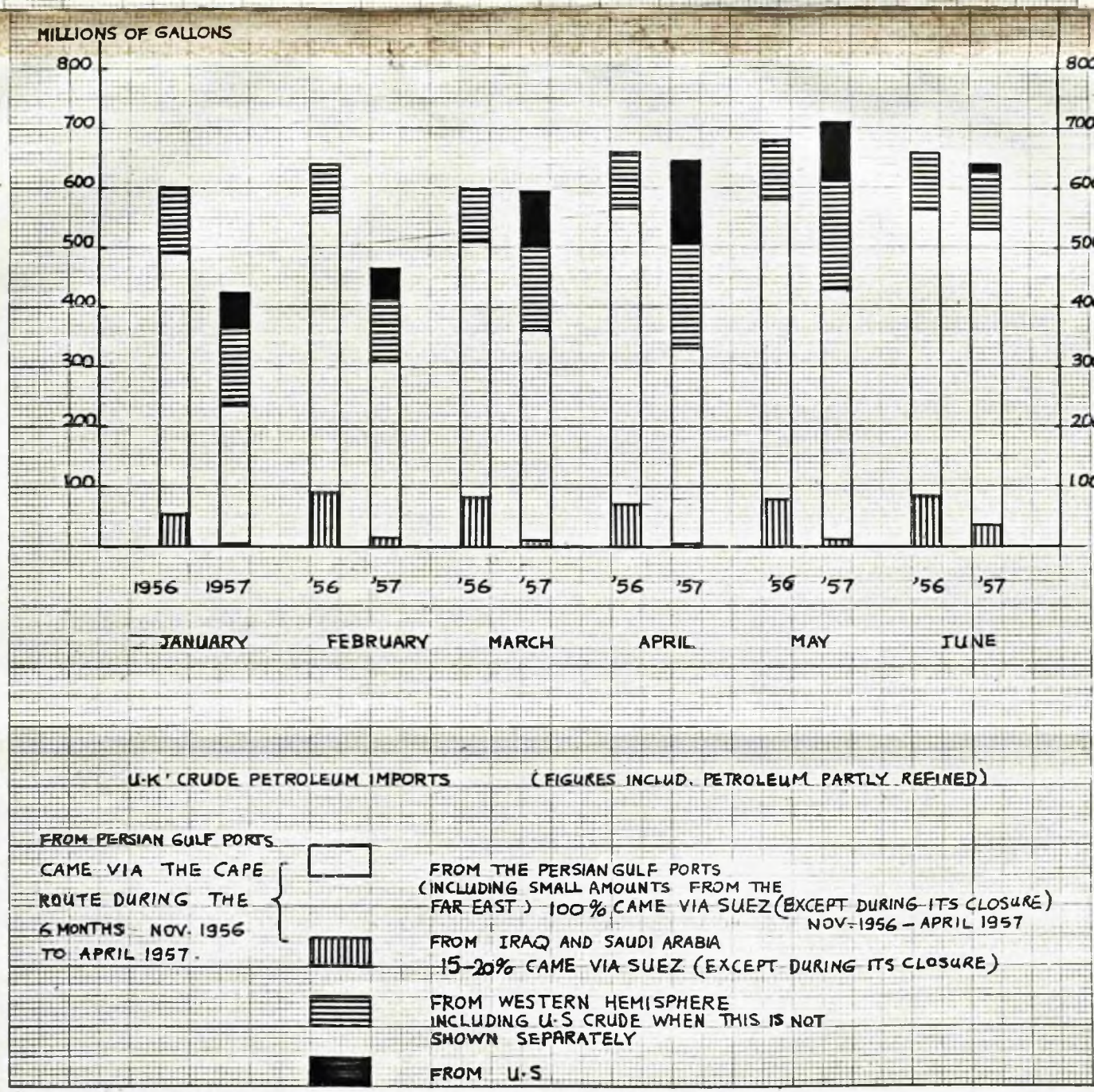
(b) U.S. included.

(c) Total imports of crude oil in the U.K. from all sources in the world, i.e. (a) + (b)

Sources: "Monthly Accounts for Trade and Navigation"
Parliamentary Accounts and Papers.

However, to see whether or not this increased contribution had filled the gap in oil supplies created by the closure of the Suez Canal, and partly by the sabotage of I.P.C. pipelines, some observations have to be made about the development of crude oil imports from the Middle East during the same period. This can be seen in Diagram (46), where crude oil imports into Britain during the twelve months July 1956 - June 1957 are differentiated according to the source of supply and are compared month by month with the period July 1955-June 1956. It is clear that imports from the Western Hemisphere during the four months November 1956-February 1957 had left a considerable gap in crude supplies. During March and April 1957 total crude oil imports in Britain were only a little lower than those obtained in the corresponding months in 1956. That was partly due to a higher level of crude exports from the Western Hemisphere and partly to the successful co-ordination of tanker operations all over the world which increased the rate of Persian Gulf crude exports via the Cape route. In the diagram British imports of crude from Iraq and Saudi Arabia are shown separately because 80-85% of these came normally via pipelines to the Eastern Mediterranean ports. It can be seen that these imports had been cut severely by the sabotage of I.P.C.





U.K. CRUDE PETROLEUM IMPORTS (FIGURES INCLUD. PETROLEUM PARTLY REFINED)

FROM PERSIAN GULF PORTS CAME VIA THE CAPE ROUTE DURING THE 6 MONTHS NOV. 1956 TO APRIL 1957.

FROM THE PERSIAN GULF PORTS (INCLUDING SMALL AMOUNTS FROM THE FAR EAST) 100% CAME VIA SUEZ (EXCEPT DURING ITS CLOSURE) NOV-1956 – APRIL 1957

FROM IRAQ AND SAUDI ARABIA 15–20% CAME VIA SUEZ (EXCEPT DURING ITS CLOSURE)

FROM WESTERN HEMISPHERE INCLUDING U.S CRUDE WHEN THIS IS NOT SHOWN SEPARATELY

FROM U.S

pipeline system in Syria and by the oil embargo imposed by Saudi Arabia. Thus the supplies of crude which Britain imported from these two countries were reduced during November 1956 to April 1957 to amounts obtained from oil fields in southern Iraq only, which normally came via Suez.

The above estimation of the gap in oil supplies during the closure of the Canal was simply made by comparing crude oil imports during the emergency with those obtained during the corresponding periods in 1955 and 1956.

However, by examining the development of British crude imports during the five years period 1954-58, excluding the second half of 1956 and the first half of 1957, we would clearly see that the trend was set for an increase of 7% to 7.5% per annum. During the first half of 1956 imports of crude increased by 7.3% above those of the corresponding period of 1955.

Between the nationalization of the Suez Canal and its closure crude imports into Britain increased by more than 13% - most probably for purposes of stockpiling. Yet, had the situation been normal (no Suez crisis) imports of crude presumably would have been increased by 7.3% above the corresponding period in 1955, and reached 3897.792 mil. gallons (the actual figure was 3567.6 mil. gallons). On

this basis the monthly average of crude oil imports in the second half of 1956 could have been 649.632 mil. gallons. Comparing this figure with the actual monthly average of crude imports in November and December 1956, i.e., 463.435 mil. gallons, we may estimate that there had been a gap in supplies by as much as 186.199 mil. gallons per month, i.e, 28.7%.(3) Actual imports of crude in November and December 1956 were about 22% below those of the corresponding period of 1955. Table (38) and Table (39) furnish some detailed explanation for the methods adopted in obtaining the above estimation and also estimated figures for 1957. In 1957 an amount equal to 695.608 mil. gallons per month most probably would have been imported in Britain if the situation was "normal". The actual monthly average of crude imports in the four months January-April 1957 was below this figure by 162.698 mil. gallons, a gap of 23.4%.

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(3) On the basis of 1956 rate of crude imports, it was generally estimated that the level of imports in November and December 1956 was down by about 29%. See Petroleum Press Service, Vol. 24 - 1957, p.181.

TABLE (38)

BRITAIN'S CRUDE OIL IMPORTS DURING THE PERIOD 1955-1958

Estimations for the gap in oil supply in the years 1956 and 1957, due to the Suez crisis. (All Figures in Millions of Gallons)

Year	Estimates (a)	(b)	Actual	Selected Estimate	Difference From Actual	%
1955	-	-	7212.2	-	-	-
1956	7737.8	7717.1	7407.6	7727.5	-319.9	4.14%
1957	-	8347.3	7241.8	8347.3	-1105.5	13.24%
1958	-	-	8740.4	-	-	-

Estimate (a):

First half of 1956 (Jan. - June).....3840.003 mil. Gallons

First half of 1955 (Jan. - June)..... 3579.568 " "

Thus, Rate of Growth = 260.435/3579.568 = 7.3%

Estimated crude oil imports in the second half of 1956 on the basis of a 7⅓% rate of growth above the amount actually imported in the second half of 1955 (3632.611) = 3897.792 mil. Gallons.

Estimation: 1956

First half of the Year.....	3840.003	(Actual)
Second half of the Year.....	3897.792	(Estimated)
Total	7737.795	Mil. Gallons

Estimate (b):

Total crude oil in imports in 1958.....8740.4 Mil. Gallons

Total crude oil imports in 1955..... 7212.2 " "

1955 and 1958 have been selected in order that an estimate can be made for the rate of growth at which imports would have been developed if the Middle East transit facilities were not disrupted during the six months November 1956 - April 1957.

Rate of growth per year calculated on the basis of the amounts imported in 1955 and 1958 = 7.07%

Thus, on the basis of 7.07% rate of growth above 1955' crude imports, imports of crude oil in 1956 = 7717.1 mil. Gallons.

Estimate (b)

Secondly, estimated crude oil imports in 1957, on the basis of 7.07% rate of growth above the estimated figure of 1956 (i.e. 7717.1), = 8347.3 mil. gallons.

(See also Diagram (47)).

TABLE (39)

Monthly Averages of Crude Oil Imports during November 1956 - April 1957. Actual Imports compared with Estimates*1 (Figures in millions of gallons).

	1956. Nov.-Dec.	1957 Jan.-April.
From Persian Gulf Ports (via the Cape of Good Hope)	308.389	309.287
From the U.S.	64.884	87.320
From the Caribbean area and other supply sources West of Suez*2	90.160	136.303
Total Imports (Actual) Monthly Average.	463.433	532.910
Total Imports (Estimate) Monthly Average.	649.632	695.608
Estimated Gap in Imports (Monthly Average)	186.199	162.698

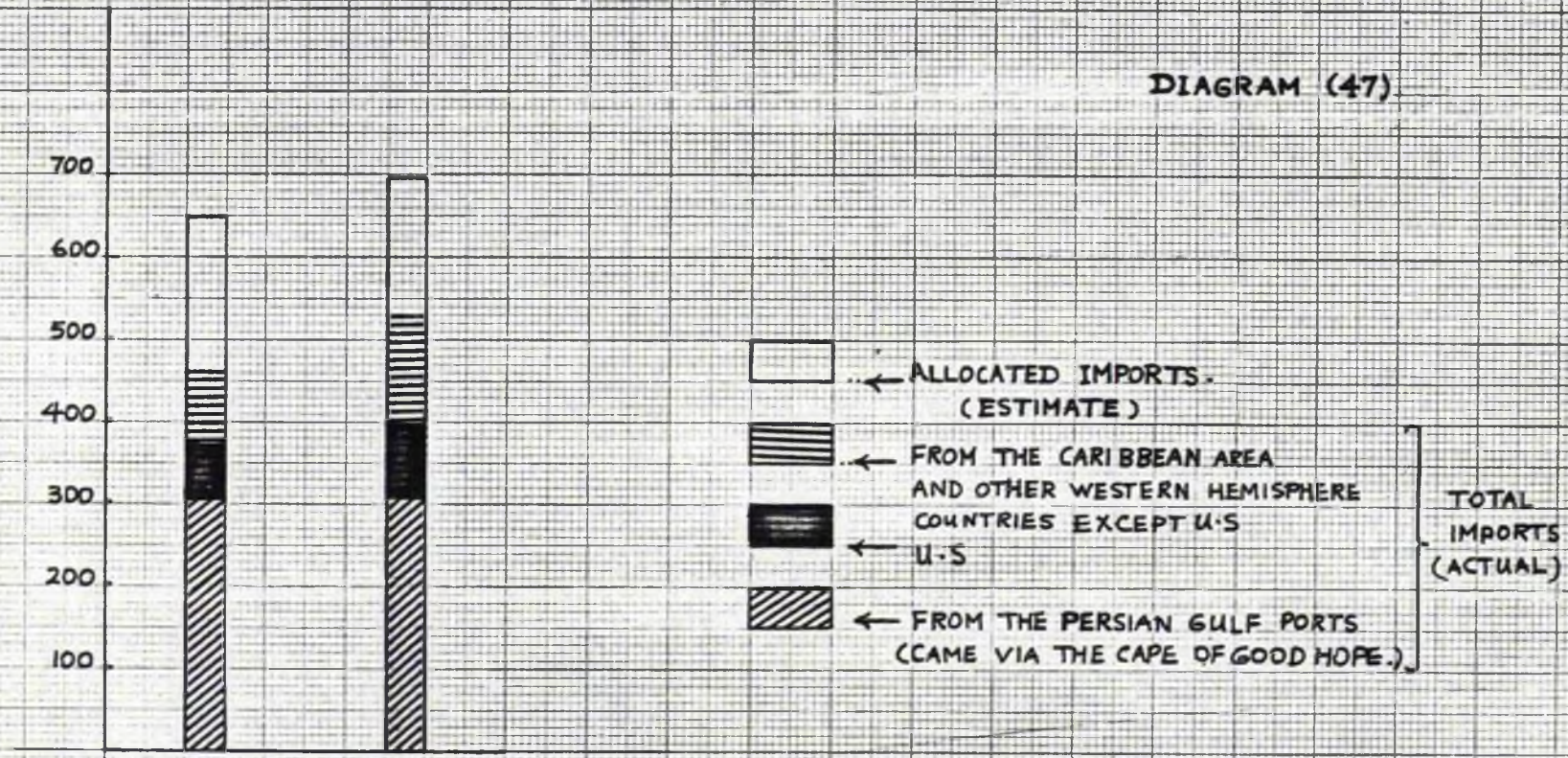
1 * Estimates derived from Table (38) above.

2 * U.S. is shown separately.

(See also Diagram (47)).

U·K' CRUDE PETROLEUM IMPORTS

DIAGRAM (47).



Nevertheless in spite of the heavy drain in crude imports during November and December 1956, the year's total imports were only 4.14% below that level which has been estimated above for intended imports - thanks to the precautionary steps which were taken before the closure of the Canal and which led to an exceptionally high level of imports during the three months August-October. The effect of such a small gap in crude imports on the level of home consumption of products was easy to overcome by the rationing of consumption and probably by some drawing on stocks. So far rationing was concerned an all round reduction in oil deliveries of 10% was imposed in Britain from the beginning of December. In 1957 the level of total crude imports was about 13.24% below the level estimated for normal imports in that year. Table (40) shows the reductions in oil products consumption in the first quarter of 1957 which was made possible through restrictions on consumption.

Figures are not available for the contribution made by oil stocks during the crisis. Yet, according to the Press, stocks stood at about 5 mil. tons (4) -

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(4) See for instance The Financial Times - Nov. 2, 1956, p. 6. Oil stocks were estimated at 5 mil. tons or about 6-8 weeks supply at 1955 rate of consumption.

TABLE (40)

THE EFFECTS OF RATIONING DURING THE CLOSURE OF THE SUEZ CANAL AND THE I.P.C. PIPELINES ON CONSUMPTION OF THE MAIN OIL PRODUCTS IN THE U.K. - 1st Qrt. 1957.

Product.	1st Quarter 1956 Metric Tons.	1st Quarter 1957 Metric Tons.	Percentage Change.
Motor Gasoline	1,428,157	1,003,397	-29.7
Gas/Diesel Oil (inland)	1,149,784	926,977	-19.4
Fuel Oil (inland)	1,926,818	1,731,784	-10.1
Gas/Diesel Oil (Bunkers)	266,717	154,843	-41.9
Fuel Oil (Bunkers)	928,324	519,600	-44.0

Source: O.E.E.C. "Europe's Need for Oil", p.78
(Implications and Lessons of the Suez Crisis)

Paris. Jan. 1958.

about 1307.6 mil. gallons - by the time of the crisis. If that figure was correct such stocks should have been sufficient by themselves to cover over 90 % of the estimated gaps in oil supplies in 1956 and 1957 (See Table 38). However, figures given by the O.E.E.C. for Europe showed that drawings from stocks had only been substantial, and essential to meet the crisis, during November 1956. Total European stocks were reduced by 3.921 mil. tons during that month, i.e., from 17.556 mil. tons in 1st November to 13.635 mil. tons by the 1st December. Stocks were increased after that, with a little exception in February 1957, and reached 16.369 mil. tons by the beginning of April. By the time when the Canal was re-opened they totalled 19.653 mil. tons.

(b) Commodities Other Than Oil.

Among all Suez borne commodities oil was by far the most important. It increased the intensity of the problem created by the Canal closure that tanker tonnage was fully employed before the crisis and that the relative advantage of Suez over the Cape route was highest in the case of the journey between Britain and the Persian Gulf.

In the case of commodities other than oil the problem of supplies maintenance via the Cape was less critical. As it has been estimated in the previous chapter at least 21% of British imports came via Suez and of them about 6.8% were of Australian origin. The maintenance of such a large proportion of trade which consisted of wool, wheat, fresh food stuffs and some industrial raw materials did not present any serious problem after the closure of the Canal.(5) Re-routing round the Cape Australian shipments which normally came via Suez involved only 7% increase in time spent at sea. Taking into consideration the time which the commercial vessel had to spend in loading and discharging at ports the difference between Suez and the Cape route in terms of round trips per year was nil in case of Australia. See Table (41).

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(5) See Diagram 48-6.

TABLE (41) ✗

THE SUEZ ROUTE RELATIVE ADVANTAGES

	Round Trip Days *		Round Trips A Year +	
	Via Suez	Via Cape	Via Suez	Via Cape
From London to:				
Persian Gulf(1)	37	65	9	5⅓
Mombasa	30	43	6	5
Bombay	31	54	6	4⅓
Calcutta	40	57	5	4
Colombo	34	52	5⅔	4½
Singapore	41	58	5	4
Penang, Malaya	40	56	5	4¼
Sydney	58	62	4	4
Wellington	63	66	4	3¾
Hong Kong	48	65	4⅔	3¾

Source: "The Economist", Aug. 4, 1956, p.419

* For all trips except Persian Gulf, Steaming time at 16½ knots

\+ For all trips except Persian Gulf, every round trip included. extra 30 days for loading and discharging at ports.

(1) Assuming tanker speed 14½ knots and 4 days for loading and discharging.

However, it will be noticed from the same table that in terms of effective round trips per year the closure of the Canal raised the need for a larger volume of dry cargo tonnage, if trade was to be maintained. In the cases of India and Ceylon as well as Pakistan, dry tonnage serving the trade via the Cape route, instead of Suez, had to be increased by proportions which roughly varied between 20% and 30% Trade between Britain and Malaya and other Far Eastern countries could be maintained via the longer route by an extra 15% to 20% in dry cargo tonnage which was employed via Suez. As regards tonnage which served the British trade with Tanganyika, Kenya, Zanzibar, Somaliland, Sudan, Aden, there was a necessity of an increase in tonnage by about 40% to 60%. During the crisis Liner firms had to provide special feeder services to these Suez route countries. Yet it must be emphasised that a 28% increase in the tonnage which served the trade between London and Bombay was much larger than a 60% increase in the tonnage that served trade with a Somaliland port.

The extra dry cargo tonnage had to be found in the tramp market. At the time of the Suez closure there were about 80 vessels at the disposal of the British government and probably 20 or more with the French government, still requisitioned for military

shipments. Besides, seasonal requirements for dry tonnage were normally high at that time of the year, for cereals, sugar and coal. Thus by the time of the Canal closure there was an apparent acute shortage in supply of dry cargo tonnage.

Again the U.S. was able to alleviate the situation by re-activating some units of its reserve fleet. During October and November 1956 the Federal Maritime Board authorised the release of some 30 of the "moth-ball" fleet to carry coal to Europe and a similar number to carry government agricultural surplus to Asia.(6) These contributions, and some others made during December, had effectively increased world dry cargo tonnage and thus indirectly provided some of the extra requirements for the European-Eastern trade after the closure of the Suez Canal.

The derequisition of ships, taken for military purposes, was made at several stages during the two months which followed the military events at Suez. By the end of November about half the tonnage previously requisitioned was re-activated and the rest of the vessels was made available to the trading world during December 1956.

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(6) The Economist, Vol. 181, 1956, p.509.

As freight rates were rising dramatically between August and December 1956, many private shipowners were encouraged to re-activate their laid-up vessels. Yet the contribution which came through this channel after the closure of the Canal was not very significant. Most of the laid-up tonnage, for lack of unemployment, had already been re-activated during the two months which followed the nationalization of the Canal-to quote figures for British laid up ships; 12,894 gross tons were re-activated between 1st October 1956 and 1st January 1957 compared with 23,899 gross tons during the three months July - September 1956.

Obviously all these additions to the supply of world dry cargo tonnage had together eased the situation greatly. By January 1957 conditions in the freight market were much easier than they had been since the nationalisation of the Suez Canal. The sharp fall in tramp freight rates during 1957 (See Diagram 50) showed that the supply of dry cargo tonnage had increased above world trade requirements. In fact during the four months which preceded the re-opening of the Canal shippers had no problem in obtaining any extra amount of tramp tonnage that they needed. Since that time until the re-opening of the Canal, the effect of the crisis was only

limited to the influence which higher freight rates (Liner firms) could exert on the trade.

Examination of the monthly figures of imports showed that supplies of commodities which came from Asia and East Africa, normally via Suez, were significantly disturbed during November and December. In some cases, such as rubber and tea, November figures were notably very low whereas in other cases the dislocation happened mainly in December. Generally speaking the disturbance in November imports was due to the sudden closure of the Canal and the inevitable delay in the arrival of shipments. On the other hand, one tends to think that the low level of imports from the Far East during December 1956 would have been avoided if there was enough dry tonnage available in the market for chartering.

During the four months January to April 1957, monthly imports from the Far East varied differently from the normal seasonal trend. Yet on the average, in the majority of the cases examined, they were maintained at the level of the corresponding period of 1956. In some cases such as that of tea, imports during the first quarter of 1957 were above those of the corresponding period in 1956. In the case of rubber the situation was different. See Diagram (48, a, b, d). Yet the reduction in rubber imports

DIAGRAM (48).

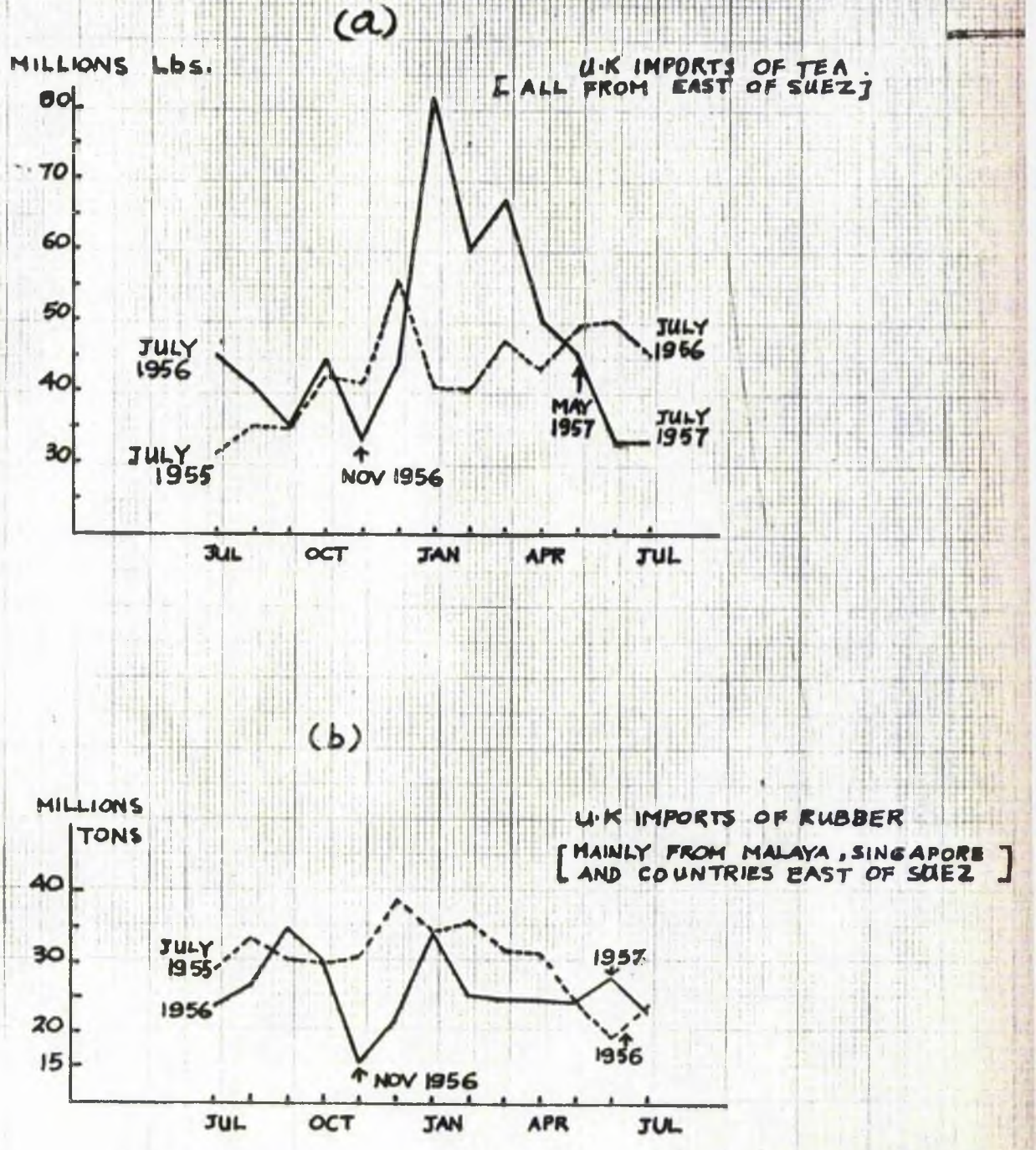
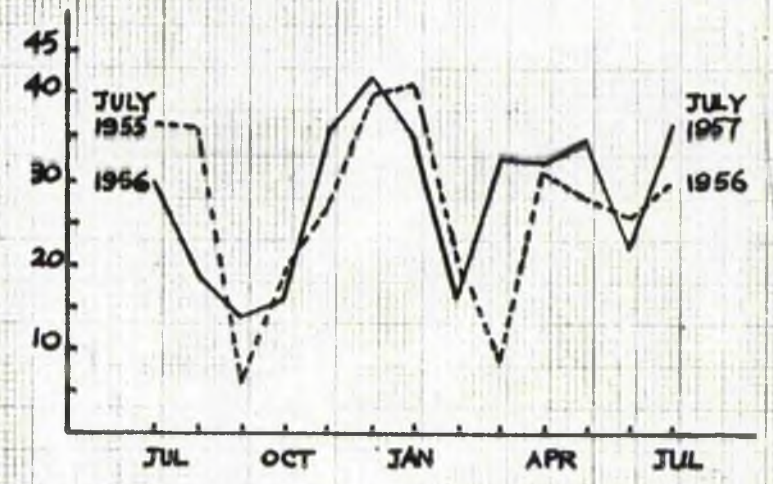
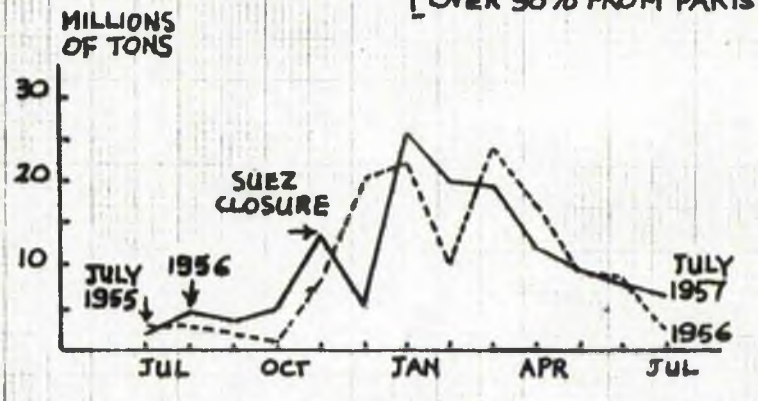

(a)
MILLIONS Lbs.
U·K IMPORTS OF TEA.
[ALL FROM EAST OF SUEZ]
80
70
60
50
40
30
JULY 1956
JULY 1955
NOV 1956
MAY 1957
JULY 1956
JULY 1957
JUL
OCT
JAN
APR
JUL
(b)
MILLIONS TONS
U·K IMPORTS OF RUBBER
[MAINLY FROM MALAYA, SINGAPORE AND COUNTRIES EAST OF SUEZ]
40
30
20
15
JULY 1955
1956
NOV 1956
1957
1956
JUL
OCT
JAN
APR
JUL

DIAGRAM (48).

(C) U·K IMPORTS OF WOOL FROM AUSTRALIA



(d) U·K IMPORTS OF RAW JUTE [OVER 90% FROM PAKISTAN]



was not only particular to the period of the Suez closure, it continued after the re-opening of the Canal and in the following years. (In 1958 raw rubber imports were 15 m. tons below the level of 1955).

Trade statistics showed that the closure of the Canal had a depressing effect on the imports of some kinds of oil seeds, cereals, fresh food stuffs which came from Asia and East Africa. Shipments of these goods to Britain during the crisis were mostly affected by the extra cost of transport as well as by the need to spend more time at sea rather than by the shortage in shipping tonnage. However, the principal flow of the fresh foodstuffs from East of Suez normally came from Australia and New Zealand. Shipments of wheat, butter, fruits, fresh vegetables continued to flow from these two countries through the Cape route and Panama Canal,(7) without being slightly reduced by the closure of Suez. In fact imports of some of the Australasian products such as butter and wheat were

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(7) See Diagram (1), Appendix E at the end of this Chapter) for the increase in Panama Canal traffic during 1956 and 1957. Most of the increase (See the Panama Report for 1957-58) was credited to Australasia/Europe traffic and also to some extent to shipments between Asia and Europe.

proportionally higher during the crisis when compared with the levels of 1955 or early 1956. See Table (42) for wheat imports from Australia. Yet imports of fresh meat from Australia (8) during the three months which followed the Canal closure were apparently much lower than their level during the corresponding period in 1955-56. See Table (43). Meanwhile some small quantities of fresh meat which normally came from Eastern Africa were sometimes reduced to nil, until the Canal was re-opened.

As regards the annual figures of the trade which came from East of Suez, evidence clearly showed that the effect of the closure of the Canal for a six month period in 1956-1957 had but only a slight effect on the levels of these two particular years. The situation would have been completely different if the large proportion of imports which came from Australasia had to come from India and the Far East as it was the case until the first War period. The problem of tonnage shortage would have also been quite different if the U.S. had not possessed such a huge reserve fleet (9) in the post-war period.

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(8) Also, to some extent meat imports from New Zealand.

(9) See Table (1) - Appendix E for figures concerning U.S. Reserve fleet in relation to world tonnage. Such a fleet could always increase the elasticity of the supply of world active tonnage.

TABLE (42)

U.K. WHEAT IMPORTS, SHOWING PROPORTIONS WHICH CAME FROM AUSTRALIA.

	Total Wheat Imports	Percentage from Australia	Grain Freight Rates
	Mil. Cwts.		(1952=100)
1955			
Jul.	6.651	12.6	130.9
Aug.	9.353	7.3	131.0
Sep.	6.491	9.2	143.0
Oct.	7.111	11.8	155.2
Nov.	6.589	10.2	143.6
Dec.	7.375	6.5	154.4
1956			
Jan.	6.959	8.7	160.6
Feb.	8.450	7.7	157.0
Mar.	8.167	4.5	167.5
Apr.	9.288	16.2	185.0
May	7.529	17.8	181.8
June	10.930	8.0	161.6
Jul.	10.049	19.5	162.8
Aug.	6.969	16.4	169.0
Sep.	5.549	17.1	171.4
Oct.	8.845	12.2	170.9
Nov.	7.640	10.6	196.6
Dec.	6.385	17.2	206.4
1957			
Jan.	7.513	16.9	189.6
Feb.	8.081	15.0	182.3
Mar.	8.378	18.9	153.0
Apr.	6.480	25.3	137.4
May	7.881	31.8	106.7
June	5.900	9.1	102.7
Jul.	6.876	Nil	97.2

It can be observed that during periods of increasing rates of freight total wheat imports into the U.K. were affected proportionally higher than wheat imports from Australia.

TABLE (43)

U.K. IMPORTS OF MEAT AND MEAT PREPARATIONS

(All Figures in Millions of Cwts.)

	From Australia	From New Zealand	Total U.K. Imports	From Australia	From New Zealand	Total U.K. Imports
		1955			1956	
October	0.460	0.509	2.411	0.385	0.563	2.428
* November	0.392	0.557	2.462	0.305	0.759	2.552
* December	0.751	0.584	2.725	0.350	0.332	2.052
		1956			1957	
* January	0.538	0.821	2.879	0.346	0.454	2.379
* February	0.503	0.428	2.064	0.287	0.421	2.050
March	0.195	1.046	2.862	0.380	1.123	3.010
April	0.186	0.747	1.986	0.269	0.723	2.537
May	0.196	0.586	2.224	0.306	0.691	2.545

THE RISE IN THE COST OF TRANSPORT.

The most direct increase in shipping costs consequent upon the use of the Cape route instead of Suez resulted simply from spending more days at sea. This naturally differed according to the speed of the vessel employed in the voyage.

Yet, by using a fast freighter steaming at 16½ knots (1956 figure) some comparison can be obtained and would be useful for our purpose, see Table (41). One round trip from London to Bombay took 54 days by the Cape instead of 31 by Suez, to Singapore 58 days instead of 41 and to Hong Kong 65 days instead of 48 by Suez. In the case of Australia and New Zealand the difference between the Suez and the Cape in one round trip from London was only 3-4 days. Assuming a tanker speed of 14½ knots (1956 figure) one round trip from London to the Persian Gulf took 37 days via Suez against 65 days via the Cape. That was the greatest saving in time obtained by using the Suez route instead of the Cape route.

By using different speed vessels in different trips to the East the above picture would clearly be distorted. For instance less speedier vessels were generally used in the Indian run, in distinction from other Far Eastern runs. Thus the extra cost of shipping when using the Cape instead of the Suez

route was bound to be relatively more burdensome in a trip to Bombay compared with a trip to Hong Kong.

However, generally speaking we may fairly rely on the picture drawn out from Table (41), since the vessels which served the Eastern trade did not in fact vary considerably in their speed. According to the Suez Canal statistics and the British statistics the great majority of these vessels was roughly of speeds between 14½ and 16½ knots.

Another important factor which decisively affects the costs of shipping is the size of the vessel. It was estimated in 1956 that the cost of shipping a ton of crude oil from the Persian Gulf to London by using a fully laden tanker of 19,000 tons d.w. was via Suez 39% less than via the Cape route. Meanwhile by using a fully laden tanker of 45,000 tons d.w. the difference in shipping costs between the Cape and the Suez Canal was only 6%. See also Diagram (49) and the accompanying Table which illustrate this point for various sizes of tankers. It can be seen that the cheapest way (in 1956) of shipping oil from the Persian Gulf to Britain and other Western Europe countries was to come by using a fully laden 38,000 tons d.w. tanker via Suez. It can also be observed from Diagram (49) that the use of a fully laden 65,000 tons d.w. tanker via the Cape was cheaper per ton of oil than using a fully

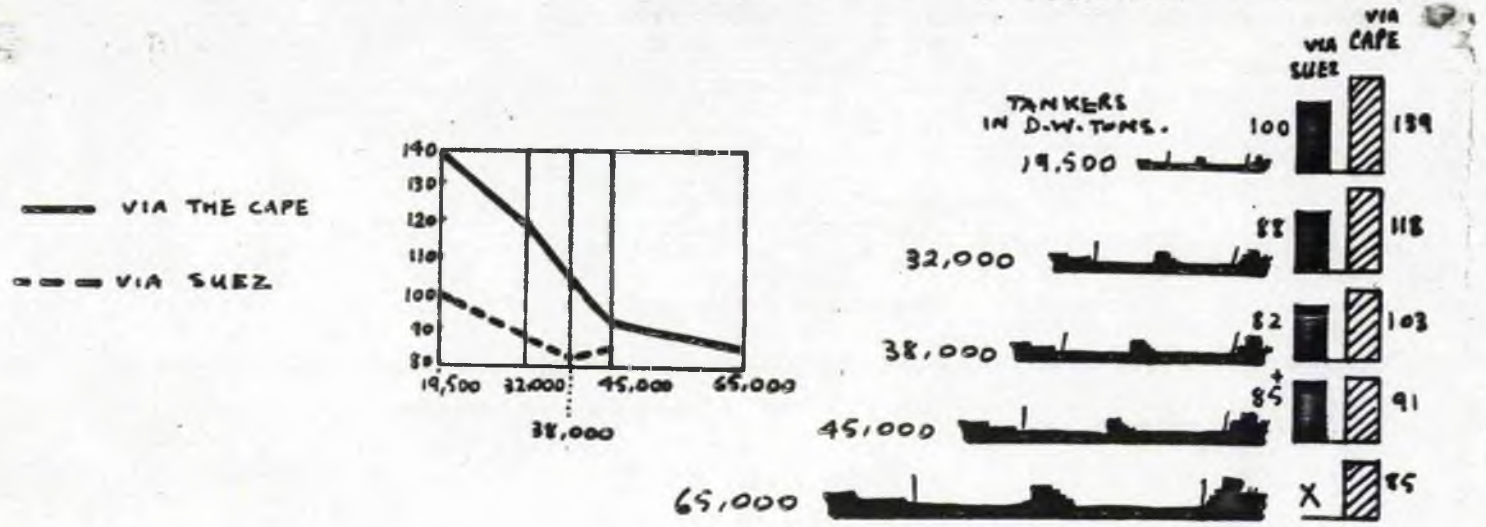

DIAGRAM (49).

45,000 - Partly loaded via SUEZ.

The Diagram shows the decreasing advantage of the Suez Canal as the size of tanker increases.

(F.T. = Financial Times)

Ref. F.T./Mr. 12/1957/1 **Source:** HARLEY MULLIONA CO.

386 a

laden tanker of the size of 32,000 tons d.w. - or under - via Suez. Nevertheless, in 1956 85% of the tankers in the world were under the size of 19,500 d.w. For the remaining 15% of the world tanker fleet the majority was of the size 35,000 tons d.w. and under. There were only about 21 tankers in the world in the size of 45,000 tons d.w. and over. Under these circumstances the closure of the Suez Canal was going to raise costs of shipping oil considerably.

Dry cargo vessels which used the Suez Canal were also of such sizes that their costs were bound to be increased substantially by using the longer route.

For 1956 British statistics showed that the average size of the foreign going tramp vessel was about 5,000 gross tons. For liners the figure was about 7,700 g. tons. Yet, as the vessels employed in the Eastern run were known to be relatively larger than those operating on other world routes it would not be surprising to learn that about 60% of dry cargo vessels which traversed the Canal in 1955-1956 were of sizes between 6,000 and 14,000 g. tons. During the Suez crisis it was estimated that the extra running costs by using a vessel of a tonnage between 10,000 and 13,000 g. tons in a round trip to India via the Cape (took about 24 days longer

than the Canal) was around £11,700.

These were the factors which affected the cost of transport because of the need to spend more days on the journey via the longer route. There were also other important factors which added more to the disadvantages of the longer sea route. Firstly, liners which were employed between Britain-Western Europe and the Far East lost easy access to all ports in the southern parts of Arabia, the eastern coast of Africa (particularly the Red sea ports) and the Mediterranean sea area (particularly the eastern ports). Under such circumstances shipping firms were left to choose either between a temporary loss of the trade with these ports or providing special feeder services to them. Obviously, either way, high financial losses or huge extra expenses were involved. By using the Cape route instead of the Canal, liners employed between Britain-Continent and Australia were also at a considerable disadvantage, being unable to make profitable diversions to Indian and Ceylonese ports besides other ports in the Suez route.

Secondly, the closure of the Suez route meant also the loss of Aden fuelling facilities as well as other fuelling stations in the Suez zone. Apart from increases in fuel oil prices during the emergency,

the price per ton of fuel was much higher at South and West African ports than at Aden (see Chapter 7, p.263) Also when ships called at fuelling stations in the Suez route they were also carrying or discharging cargo at these ports. Now costs increased because of the need to call at some African ports just for re-fuelling purposes. Consequently many shipowners preferred to carry extra bunkering fuel on their way to and from the Far East rather than making diversions and getting delayed at ports at which they normally did not dock. For a dry cargo vessel of a tonnage between 10,000 and 13,000 g. tons in a round trip between Britain and India (or the rest of the Far East) the loss of deadweight due to extra fuel carried was estimated at about £10,000.

The latter figure as well as some others given above, concerning the increase in the cost of the voyage to India and to the Far East after the closure of the Canal, have been derived from an estimation published in the Financial Times in November 1956.(10) After making allowances for the increase in interest and depreciation, because of a lower turnover per a given period of time, and for the fact that the Canal dues were saved, total extra cost in a round trip

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(10) The "Financial Times", Nov. 7, 1956, p.6.

between Britain and India, via the Cape route, was estimated at £27,450. To the Far East the extra cost of a round trip was estimated at £28,040. See Table (44). Several factors were not, however, taken into account in that estimation such as the extra delay caused by congestion of re-routed ships at African ports, the increase in fuel prices, the loss of intermediate cargo (or the cost of providing feeder services) and the rise in the dues of some African ports consequent upon the need to accommodate the extra traffic.

It has not been intended in the above argument to give any more than a broad picture for the increase in different items in the cost of the Eastern journey after the closure of the Canal. Any precise quantitative measurement in this score would be subject to error due to the exceptionally poor information available on shipping firms' expenditures and revenues. Admittedly with the help of some recent valuable studies in cost and revenue structures of ships we may be able to arrive at a reasonable estimation.(11) Yet this would involve a great deal of work which would

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(11) See for instance "Supply and Demand of Water Transport" by Thomas Thorburn - Stockholm 1960.

TABLE (44)X

EXTRA COST OF VOYAGES ROUND THE CAPE.

Rough Estimation - Published in "The Financial Times", Nov. 7, 1956.

Average Extra Days Spent in the Trip via the Cape	Extra 25 days via Cape to India	Extra 15 days via Cape Far East
	£	£
1. Extra Running Costs	11,700	11,040
2. Loss of Deadweight due to extra Fuel carried	10,000	10,000
3. Interest & Depreciation	5,750	7,000
Total	27,450	28,040

The assumption of the table was that the vessel in question carried only cargo and was of a tonnage between 10,000 - 13,000 tons.

It was also assumed that ships on the Far East run - other than the Indian run - were faster and that they therefore were in a better situation so far as the first item was concerned. Yet as more capital was invested in them their extra costs in the 3rd item were higher.

most probably impede the main theme of this research; and yet it is our main interest here to see how the crisis had affected actual market freight rates which, although affected by shipowners' costs, were very much sensitive to changes in world active shipping tonnage and world demand for sea transport.

First: Liner freight rates.

Immediately after the closure of the Canal rates of freight for voyages between British and Asian ports in the Far East were raised by 15% to 17½% of the rates which were previously available. To Port Sudan, Jeddah and Massowah (Red sea ports) the rise in rates was 25%, whereas a surcharge of 20% was imposed on the journeys to Aden, Berbera, Djibouti and Assab (Eastern coast of Africa). The maintenance of trade with Red sea, Eastern African ports as well as with Aden was kept at a much higher cost by the provision of particular feeder services between them and Cape Town. There were also similar increases in rates of freight from all the above mentioned ports, in Asia and Africa, to British ports.

During November and December bunker fuel prices rose by about 25%-40% above the level of October 1956. To quote British figures diesel oil price rose from 253/6d in October to 318/- on the 10th of December.

Fuel oil price increased from 169/- in October to 236/- in December. This besides other increases in the cost of transport (explained above) which were not reckoned immediately after the Canal closure forced further revisions in rates. For example by the first week of January 1957 the surcharges imposed on traffic to Aden, East African and Red sea ports were raised to 40% and 50% instead of 20% and 25%. As regards India, Pakistan, Ceylon and other Far Eastern runs rates were raised on two occasions, first in February and then in March. Freight rates of liners which ran their services between Britain-Continent and Australia were kept at the levels which prevailed before November 1956. Yet, in February an increase of 14% was decided by the Australian conference for all cargo shipped to Britain-Continent. A similar rise was passed for the outward journey to Australia in the following month. How far the loss of intermediate cargo in the Suez route had contributed to such rise in the rates of the liners serving the Australian trade can not be determined. When increasing their rates during the crisis liner conferences justified their action on the basis of the rise in their costs both because of

the closure of the Canal and because of other factors which would have made such revisions necessary even if the situation had been normal.(12) That was probably true in the case of the shipping firms which insisted on the increase even after the re-opening of the Canal. That was the case with liners serving the Australian trade, yet even then the timing of rates revision was certainly affected. As regards other journeys between Britain and East of Suez freight rates which prevailed during the emergency could not be maintained once the Canal was re-opened. For example freight rates on cargoes shipped to or from India, Pakistan and Ceylon were reduced by about 6% in May 1957 and by 9% in the following month. Yet at their level in June they were still a little over 10% of the rates of October 1956. Table (45) furnishes information on changes in freight rates for journeys between Britain and some selected countries East of Suez during 1956-57. Figures for the years 1946-56 are shown for purposes of comparison.

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(12) It is reasonable to assume that Liner firms always endeavour to maintain a balance between their costs and their revenues (including a certain profit margin). Yet it is difficult to see how they could do that and maintain their profit margins at times of trade depressions or increased supply of world tonnage.

TABLE (45)

INDEX NUMBERS OF LINER FREIGHT RATES

(1) Rate Relatives for some selected U.K. Export Routes 1945=100

(1) Australia

September 1949	108.0
September 1950	118.8
April 1951	136.62
July 1951	155.25
September 1952	136.62
July 1955	150.28
March 1957	171.32

(2) New Zealand

October 1948	105.0
September 1949	113.4
July 1950	115.28
May 1951	186.3
August 1951	124.2
October 1951	180.09
January 1952	173.88
February 1952	170.15
March 1952	161.46
April 1952	124.2
July 1955	130.31
September 1957	149.97

For Export and Import Rates.

It will be noticed that New Zealand Route - was more affected by the Korean crisis than the Australian route - The latter was affected by the Suez crisis while rates at New Zealand route did not show any change during that time.

(3) India

June 1949	109.1
January 1950	100.0
March 1951	125.0
September 1951	143.75
February 1955	158.13
March 1956	173.94
November 1956	200.03
February 1957	204.38
March 1957	224.82
May 1957	210.5
June 1957	191.4

(4) Pakistan

March 1951	125.0
September 1951	143.75
February 1955	158.13
March 1956	173.94
November 1956	200.03
February 1957	204.38
March 1957	242.82
May 1957	210.5
June 1957	191.4

(5) Ceylon

March 1951	125.0
April 1951	156.25
September 1951	172.5
January 1952	143.75
February 1955	158.13
March 1956	173.94
November 1956	200.03
February 1957	204.38
March 1957	224.82
May 1957	210.5
June 1957	191.4

(6) East Africa (Kenya)

March 1951	115.0
March 1955	126.5
November 1956	145.48
April 1957	152.7
May 1957	146.08
June 1957	132.8

TABLE (45) (contd.)

(7) Japan

February 1948	105.0
January 1951	118.13
June 1951	129.94
May 1952	118.13
October 1953	106.32
February 1954	100.41
June 1956	122.26
November 1956	142.64
May 1957	155.34
June 1957	141.21

(2) Rate Relatives for U.K. Import Routes (1945 = 100)

(1) Australia

September 1949	110
October 1951	126.5
October 1953	136.0
October 1955	146.2
February 1957	166.7

(2) New Zealand

September 1948	105
October 1949	113.4
May 1951	170.1
July 1951	113.4
October 1951	124.7
November 1955	130.9
September 1957	147.26

(3) East Africa (Kenya)

March 1951	115
May 1955	126.5
November 1956	145.5
May 1957	149.6
June 1957	136.0

(4) India
(5) Pakistan
(6) Ceylon.

March 1951	125.0
September 1951	143.8
February 1955	158.1
March 1956	173.9
November 1956	200.0
February 1957	204.4
March 1957	224.8
May 1957	210.5
June 1957	191.4

Source: Study on "Index Numbers of Liner Freight Rates", by Dr. D.L. McLachlan

Yorkshire Bulletin of Econ. and Soc. Research, Vol. 10, No. 1, June 1958.

Second: Dry Cargo Tramp Rates

Freight rates of tramp cargo ships always reflected, rather accurately, the state of supply and demand for available world shipping tonnage. With a given supply of active tramp tonnage the rise in demand in any of the world routes would push all freight rates upwards, and vice versa.

Between July and October 1956 tramp shipping time charter rates rose by 14.8% as compared with only less than 4% in the corresponding period of 1955. As it has been explained that was due to the requisitioning of a number of vessels for military shipments, higher rate of chartering, above the normal seasonal demand, due to precautionary stockpiling of Sueze borne commodities and also for fear of a sudden Canal closure. Yet, during the same period voyage charter rates for various goods normally carried by tramps (coal, grain, sugar, timber, ore fertiliser and esparto) still varied according to seasonal requirements. After the closure of the Canal demand for tramp tonnage was sharply raised by attempts to maintain supplies of commodities which were normally carried to West of Suez via the Canal. Theoretically speaking "an increasing demand for tonnage causes more and more ships to be taken out of lay-up until a

stage is reached, where only ships undergoing repair or inspection remain and then supply becomes very inelastic; even very large increases in freight rates produce but little increase in the supply of tonnage. Should demand continue to be in excess of supply very rapid increases in freight rates will occur".[x] That is what happened in 1956. Laid-up tonnage was almost all re-activated by November and then, inevitably, freight rates were negotiated at rapidly rising levels one day after another. During the military events which took place around the Suez Canal a vessel was chartered for carrying manganese ore from Portuguese India to Northern France at 160/- per ton (f.i.o) via Suez or 193/- via the Cape of Good Hope. 125/- per ton was the last rate reported in that trade before the outbreak of fighting. The rate of freight for wheat cargo from Western Australia to the U.K. was increased by 10/- per ton, to 185/- during the second week of November. By the third week of December this rate had reached 210/- per ton. Transatlantic coal and grain freight, regarded as a barometer for world rates, increased by 80% and 40% respectively during the three weeks which followed the closure of the Suez Canal. Coal rates were further affected by the shortage in oil supplies by that time. The most notable increase in transatlantic coal rates was in

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x G. Alexandersson and G. Norström, World Shipping p.37-38.

the first week of December 1956 when there was an average increase of about 3/6d per ton every day.(13) In all trade routes the Korean rates were reached and then new peaks were soon established.

To many in the shipowning industry it seemed that such a boom was going to last until the re-opening of the Suez Canal. Yet, by January 1957 there was a definite sign indicating the end of the shortage in world dry cargo tonnage. The reasons for such an early solution were clearly the release of the cargo ships previously requisitioned by the British and the French governments, the re-activation of vessels from the U.S. mothball fleet, the mild winter in Europe and the gradual increase in oil supplies which effectively reduced the demand for American coal. In Diagram (50)(14) changes in freight rates of tramp shipping are illustrated for 1956-57 and compared with other changes which took place during the period 1952-1958. It will be noticed that by March 1957

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(13) By that time the Board of Trade was about to charter a large number of vessels for coal shipments from U.S. across the Atlantic.

(14) Also, see Table 46.

TABLE (46) X

Chamber of Shipping of the U.K'

INDEX NUMBER OF TRAMP SHIPPING FREIGHT

(1) Voyage Charter 1952 = 100.0

	1952	1953	1954	1955	1956	1957	1958
Jan.	146.4	79.3	71.9	115.1	144.3	173.7	64.9
Feb.	140.6	80.0	77.6	119.8	140.2	167.6	64.0
Mar.	122.4	83.2	77.4	113.7	147.2	145.5	63.3
Apr.	108.4	85.6	75.8	110.2	151.6	134.3	62.7
May	105.8	82.2	77.4	122.6	162.2	116.6	64.6
June	91.2	73.8	77.6	128.0	155.5	109.9	66.5
Jul.	73.5	75.8	79.7	130.0	155.2	101.9	66.6
Aug.	71.2	73.9	80.1	129.9	157.9	86.9	65.0
Sept.	76.3	73.9	90.6	138.1	156.1	81.6	65.7
Oct.	84.9	77.3	99.5	148.9	153.6	80.7	70.4
Nov.	88.0	73.8	110.4	135.5	171.4	82.3	76.4
Dec.	83.7	71.3	115.5	140.1	189.4	71.6	74.6
Year	100.0	77.5	86.1	127.7	157.0	112.7	67.1

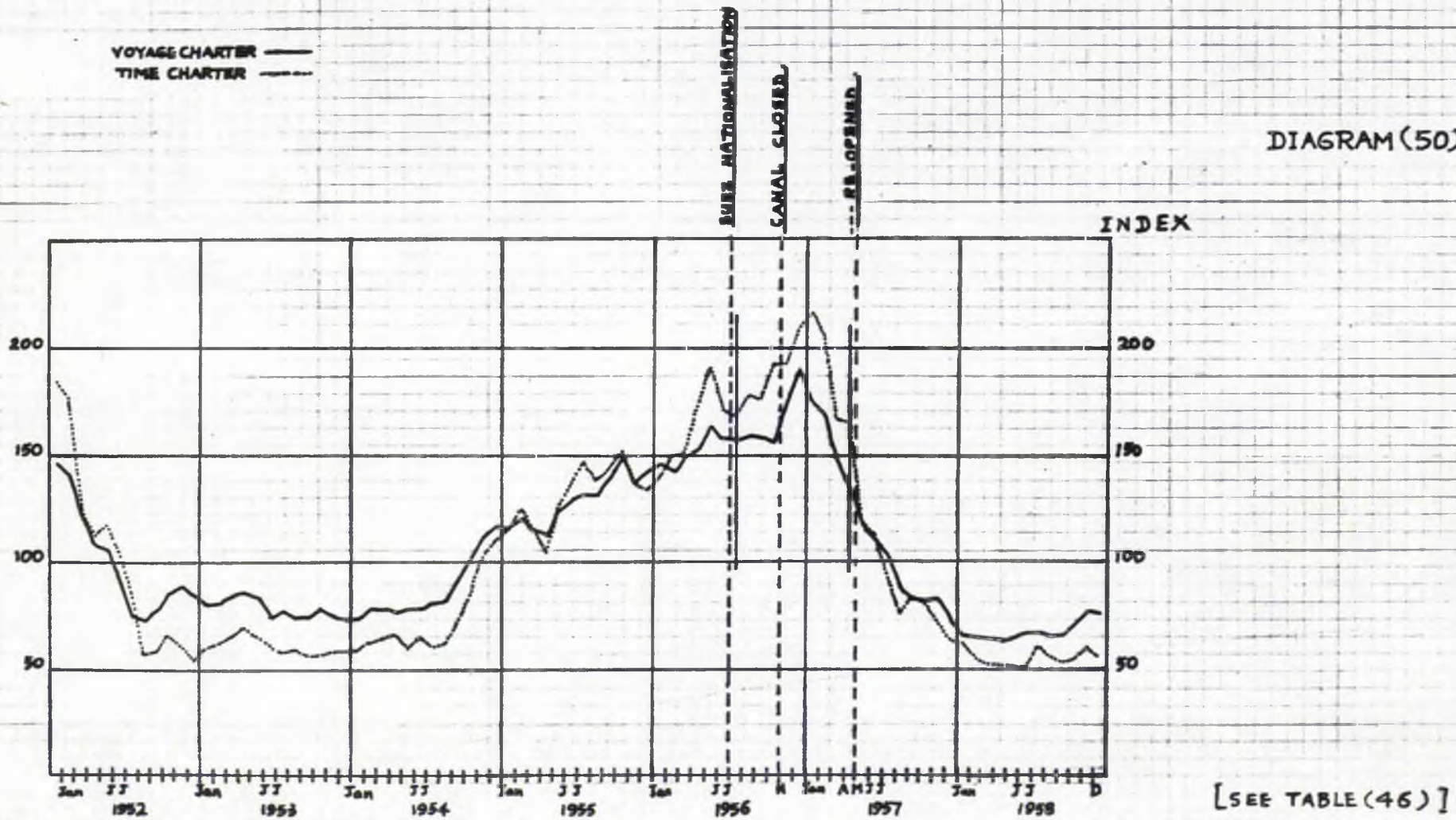
(2) Time Charter 1952 = 100.0

	1952	1953	1954	1955	1956	1957	1958
Jan.	184.5	59.8	58.3	114.6	138.0	216.3	61.1
Feb.	177.0	61.5	62.0	123.8	148.2	203.7	54.4
Mar.	124.8	64.8	63.4	113.8	150.0	165.6	51.8
Apr.	111.9	69.7	65.5	102.3	171.5	164.6	-
May.	116.5	65.5	59.0	124.2	190.0	117.9	-
June	104.1	61.6	64.2	135.4	169.4	111.8	50.6
Jul.	85.2	57.4	59.9	145.3	167.1	93.8	60.1
Aug.	56.5	59.0	61.9	137.0	176.6	74.2	55.1
Sep.	58.1	56.4	71.8	142.2	174.2	82.7	52.7
Oct.	65.6	56.3	84.0	151.2	191.8	78.9	54.2
Nov.	61.9	58.0	101.8	135.5	191.3	70.4	59.6
Dec.	54.0	57.8	109.0	132.2	207.2	63.0	55.8
Year	100.0	60.6	71.7	129.3	172.9	120.2	55.5

Source: Annual Report 1957-58 of the Chamber of Shipping

The Old Index Number 1948 = 100 the average for 1952 in that Index = 110.6

DIAGRAM (50) X

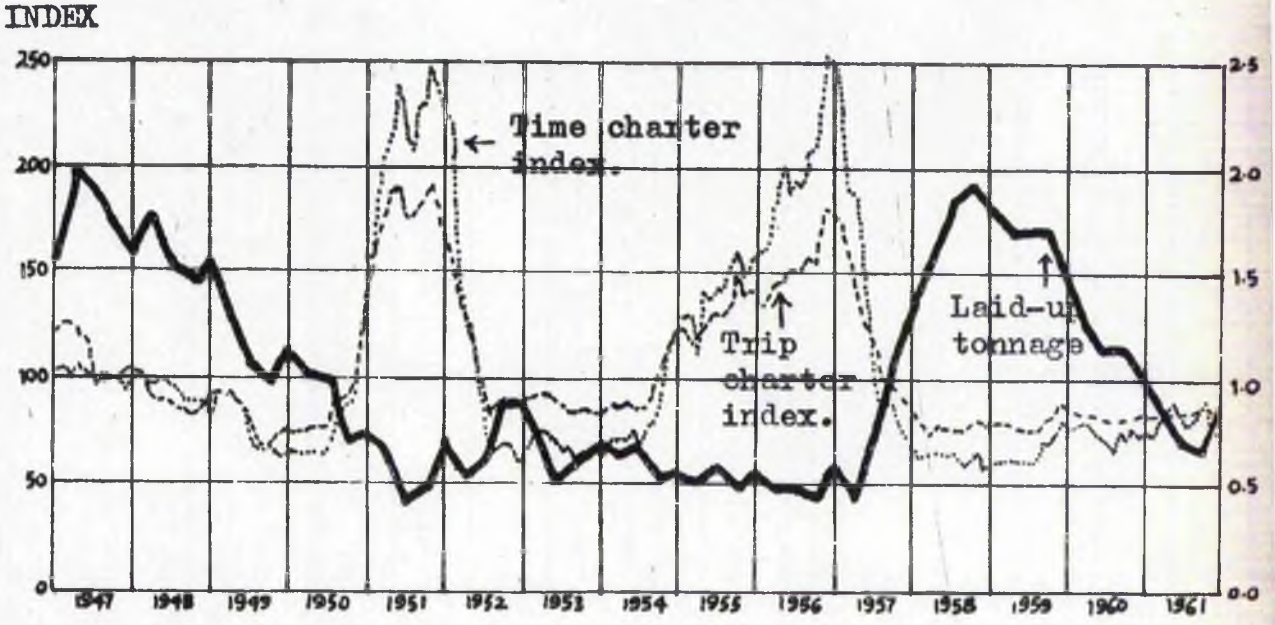


[SEE TABLE (46)]

DATA FROM THE ANNUAL REPORT OF THE CHAMBER OF SHIPPING OF THE U.K

tramp freight rates had approached the levels which were available in July-October 1956, then they began falling steeply under such levels in the following months of the year. From December 1956 to December 1957 the rate for the carriage of coal from the U.S. to North Western Europe was down from 118/- or 120/- per ton to 25/- per ton. In the same period the freight rate for grain from West Australia to the U.K. was down from 220/- to 72/6d. As a result of this depression in rates laid-up tonnage, for lack of employment, was sharply rising above any previous levels since 1935-36 - See Diagram (51). That depressed state of tramp freight continued during 1958 and for most of 1959 (when only showed little signs of recovery). The reasons for such a prolonged depression were by no means solely related to the nationalisation of the Canal and the subsequent events. In 1954 after two years of freight depression the rising level of world trade created a large demand on shipping tonnage and raised freight rates. This rise in rates (see Diagram 51) was sufficiently large so that laid-up tonnage was substantially reduced and new tonnage was ordered at various shipyards in the world. The rise in demand for new tonnage continued in 1955 and was further accelerated in 1956 by the Suez crisis.

DIAGRAM (51).



Source: With little variations, the diagram is taken from WORLD SHIPPING, by G. Alexandersson and G. Norström, 1963. Original source of data: THE CHAMBER OF SHIPPING OF THE U.K, and NORWIGIAN SHIPPING NEWS.

As we have already explained the policies of the British, the French and the American governments during the Suez crisis created extraordinary conditions in the shipping market which artificially led to a sharp rise and then fall in freight rates.(15) Before shipowners were able to recover from the Suez affair new tonnage, which was ordered on a rather large scale during 1954-1956, began to come on the market and prevented any quick recovery from the depressed rates of 1957 for several years.

Third: Tanker shipping freight rates.

The main features of the development of the rates in "tramp tanker market" (i.e. tankers chartered for a short period of time and/or per single voyage. These are usually owned by private companies other than oil companies) were the same as those in dry cargo tramp market. The fluctuations in the trip charter rates in the tanker market were however much wider than those experienced in the dry cargo tonnage during the Suez crisis.

Trip charter rate for the run between the Persian

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(15) The military campaign in Suez led to the requisition of a large number of vessels at one time and their derequisition at another time. Also the re-activation of vessels from the U.S. reserve fleet played a significant part in freight rates fluctuations during the crisis.

Gulf and Britain increased from Scale plus 250% at the end of October 1956 (Scale rate = 49/2d.plus Canal dues of 6/3 per ton) to Scale plus 325% by the end of the first week of November. Yet it must be noted that during the military events in the Suez zone the "London Tanker Brokers Panel" had fixed a new Scale rate for alternative routes from the Persian Gulf. The new rate, for vessels laden and in ballast, to U.K. and Eire via the Cape route was equal to 80/10d.(16) Thus the tanker trip charter rate (for the above quotation) had increased by 67% from 206/- to 344/- per ton, within the first week. By the end of November the Persian Gulf - Britain single trip rate had reached Scale plus 340%. That was little more than £18 compared with £6.15/- reached at the peak of 1955.

During December 1956 the single trip rate via the Cape continued to rise until it reached Scale plus 375%, £19 per ton. At the level ruling before the nationalisation of the Canal, about £5 per ton via Suez, the longer distance via the Cape would have added roughly £2 per ton.

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(16) For alternative routes between U.K.-Eire and the Persian Gulf the new Scale rate was 65/2d via the Cape laden and through Suez in ballast, including 2/- Canal dues; while via Suez laden and by the way of the Cape in ballast the new Scale rate was 65/- plus Canal dues 4/3d. Rates published by L.T.B.P. in the first week of November 1956.

Meanwhile single trip rates in other oil routes had also reflected the high level of demand which existed for available tramp tankers.(17) The ratefof transporting a ton of oil from the Netherland West Indies to U.K. (4,200 miles) rose from about £2.2/- in February-March 1956 to a peak of nearly £7.10/- in December. Diagram (53) demonstrates the development of the single voyage rates for the journey Aruba/ Curaco - U.K. Fluctuations of rates in this particular journey has been taken to indicate changes in freight rates in other main oil routes in the world. It will be noticed the steep decline in single trip rates between the end of December 1956, after it had reached a new post-war peak, and December 1957. The rate continued to fall in January 1958, then it recovered very little during February and then reached its lowest point since the war in April. It was by then less than one-tenth of the peak value reached in December 1956. The reasons for such drastic fall in single trip rates were again very similar to those in dry cargo tramp market; the release and re-activation of tonnage from the American reserve fleet, the success which international oil companies had achieved in exchange of oil supplies and tanker co-ordination and the mild winter in Europe in 1956-57(18) Later in May

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(17) See Diagram (52) which clearly shows the close correlation between tanker rates in different routes. P.P.S. V.24, p.342.

(18) Also the number of laid-up tankers was considerably reduced during the crisis.

DIAGRAM (52)X

Source: Sun Oil Co.'1957 Annual,"Analysis of the World Tank Ship Fleet".

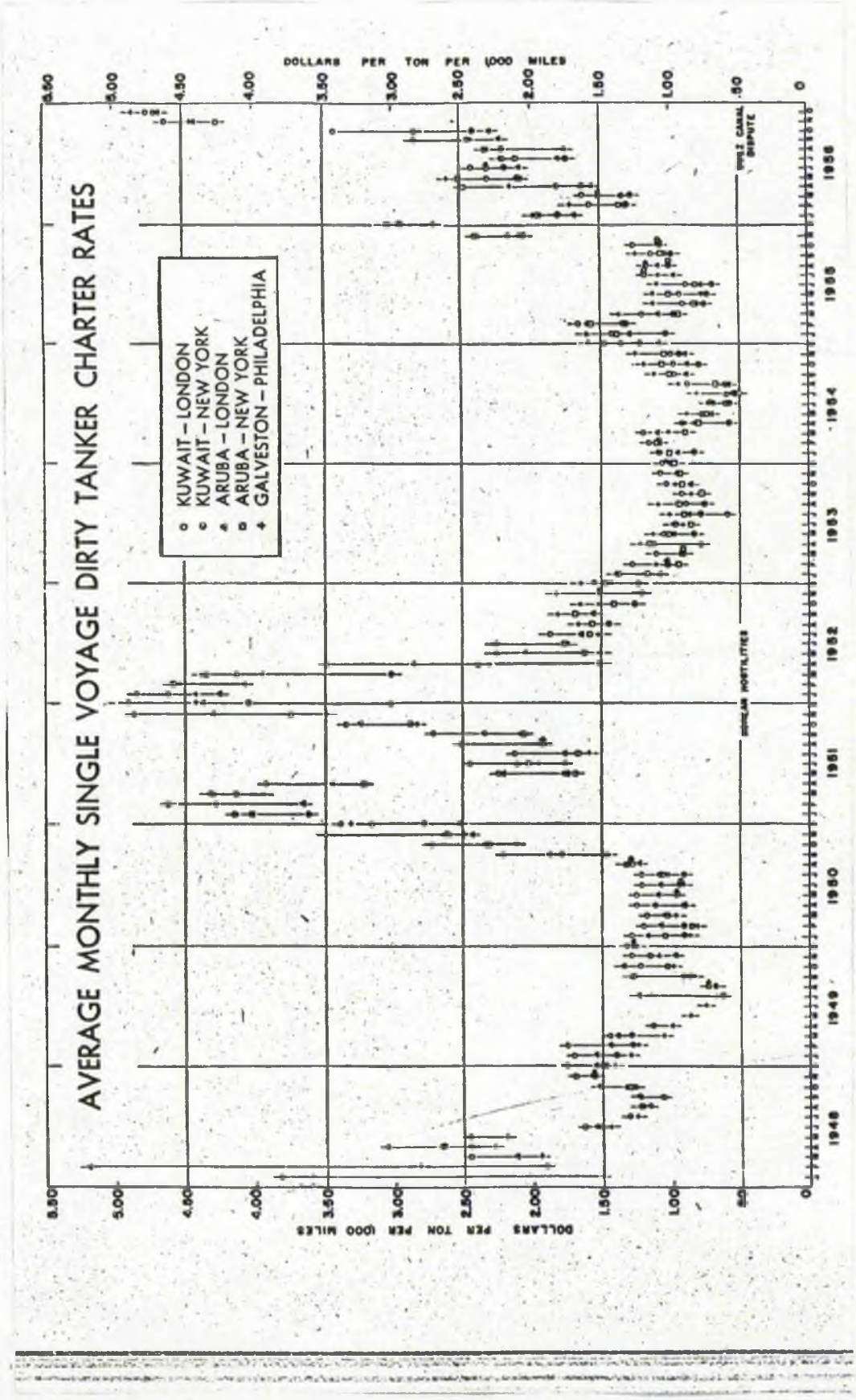
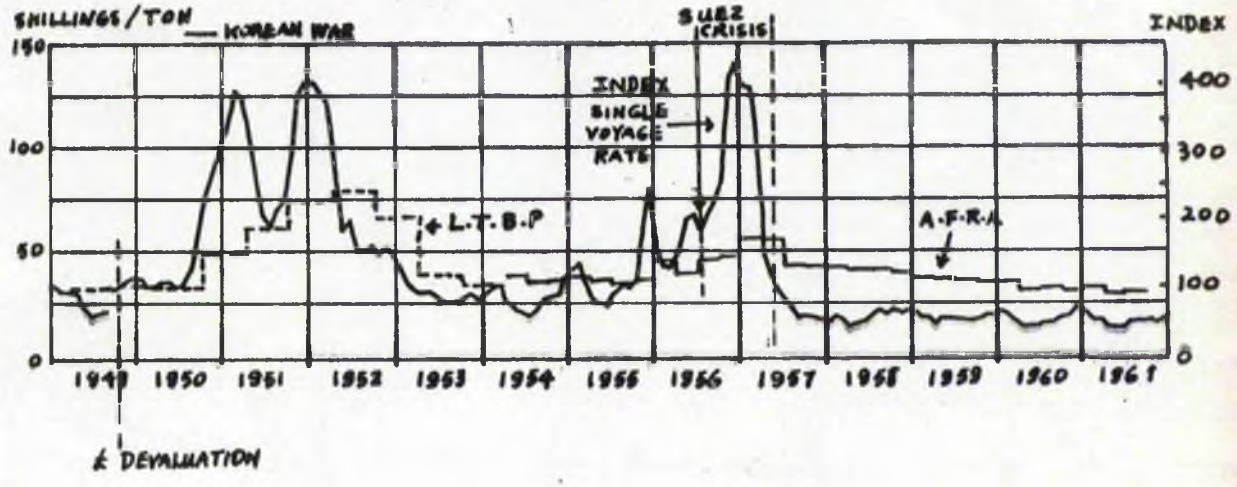


DIAGRAM (53)



* L T B P -"LONDON BROKERS PANEL AWARD RATES",AND THIS WAS LATER REPLACED BY A F R A -AVERAGE FREIGHT RATE ASSESMENT.
* L T B P AND A F R A : SHILLINGS PER TON FOR ARUBA - CURACO- U.K.
*SCALES OF THE DIAGRAM : INDEX 100 = 35 s. 6 d. -MINISTRY OF TRANSPORT (U.K) SCALE.

*Source:World Shipping,by G.Alexandersson and G.Norström., 1963.

Later in May the Canal was re-opened and thus increased the effective supply of tonnage in relation to demand. As regards the degr ession of rates which lasted for years after 1956-57 it was also explained by the continuous arrival of newly built tonnage which had been ordered on a large s cale during the boom period of 1954-56.

The bulk of oil trade was (19) however, carried in oil companies owned tankers or in tankers on long-term charter. Rates for these vessels were only to a limited degree influenced by the circumstances of Suez and by the rates paid for voyage chartered v essels. Hence they fluctuated during and after the crisis much less violently. The available measure of freight rates for these vessels is the Average Freight Rate Assessment (AFRA) of the London Tanker Brokers' Panel. (The AFRA is a weighted average of all rates; single and consecutive voyage rates as well as short-term charter and long-term charter rates). The AFRA rate showed an increase from Scale plus 41.3% in October 1956 to 74.8% in January 1957. The rate was reduced after that in April and then on 1st of July. The

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(19) About 90% in 1956-57.

The latter rate was equal to Scale plus 31.9%, by then the Canal had been re-opened and normal navigation was restored. See also Diagram (53).

Changes in Commodity Prices during the Crisis

Import prices were affected in varying degree by changes in freight rates and in some cases, e.g., oil, by changes in sources of supply which led to changes in f.o.b. prices. Wholesale prices were partly affected by the same factors, but were largely sensitive to the changes in commodity supplies as determined by the flow of imports and the size of available stocks. Besides, speculations about the length of the crisis and the ability of the importers to maintain the supply of the Suez borne commodities played a very significant role in fixing market prices.

Prices of coal, grain, sugar, ore (20) and the rest of the bulky goods which were normally carried in tramp tonnage were clearly most affected by the dramatic changes in freight rates during the crisis. Let us take wheat for example. The freight element in Canadian wheat price, c.i.f., increased from 16% in July 1956 to 18% in November and then to over 20% in early December. The c.i.f. price of wheat, imported into

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(20) Contracts for "ore-carriers"(special purpose carriers) are normally negotiated many months in advance. Thus during the Suez crisis changes in ore freight rates and prices lagged behind those of other commodities that were carried in tramp cargo.

Britain from all overseas sources, increased by about 4% between July and December 1956, compared with a fall of about 7% during the same period in 1955. During January and February 1957 c.i.f. prices continued to rise and in the latter month were about 7% above the level of July 1956. Tramp shipping freight rates had started to decline by the end of December 1956 but most of January, February and March shipments were carried in tramps which were chartered when rates were rising. Therefore the fall in rates was not immediately reflected in prices. During March 1957 wheat prices, c.i.f., fell slightly and then during the following months were falling rather heavily. By July 1957 c.i.f. wheat prices were 23.6% below the level of July 1956 and about 21% below that of July 1955. Prices of coal and sugar also showed significant variations following the trend in tramp freight rates. The proportion of freight in the c.i.f. prices of U.S. coal increased from 47% to 52% between July and November 1956 and to larger proportions in December and in January 1957. It is needless to emphasise the close relation between freight rates and prices in this particular case. As regards sugar, c.i.f. prices increased by 8.5% between July and

November 1956 mainly because of the rise in freight rates. Sugar prices continued to rise and were 45% above the July 1956 level by February 1957. However, while grain and coal prices were shaken by the fall in freight rates during 1957 sugar prices were not very much affected by this factor. In fact sugar prices were strongly affected during that period by the clearance of surplus stocks of Cuban sugar which had been considerable since 1952, and also by the low European beet crop for 1956-1957. Thus no close correlation could be drawn between changes in sugar import prices and freight rates by that time.

Meanwhile, in none of the cases examined above had wholesale prices fully reflected the changes in c.i.f. prices. Obviously the rise or fall in import prices had only represented a rise or a fall in the costs of additional stocks. Most of the commodities which normally came via Suez in conference ships enjoyed high prices, see for instance the prices of rubber, tin, copper and wool in Table (47). Considering July 1956' prices and rates of freight we can find that the freight element in Malayan tin was about 1.7%, in Malayan rubber 2.5% and in Indian tea about 6%. As regards Australian lead and zinc the percent occupied by freight was about 7%. In the case of Pakistan raw jute the freight element was about 11%.

TABLE (47)

COMMODITY PRICES

Commodity	Unit	End 1955	End 1956	End 1957	Per Cent Fall(-) or Rise(+) End 1956 Compared with End 1957
Tin	£/Ton	833½	782½	730½	- 6.6
Copper	£/Ton	400½	268¼	180¼	-32.8
Zinc	£/Ton	100⅞	102⅝	61⅛	-40.4
Lead	£/Ton	120¾	116⅞	72¾	-37.8
Rubber	d/lb	37⅜	31 15/16	24½	-23.3
Cotton (U.S.future)	d/lb	27.40	26.85	26.55	- 1.1
Wool (Futures)	d/lb	105½	136	108⅜	-20.3
Sisal (E. Africa)	£/Ton	85	75½	73	- 3.3
Whale Oil	£/Ton	87½	95	82½	-13.2
Sugar (Fas Cuba)	Cents/lb	3.23	4.90	3.85	-21.4
Cocoa	sh/cwt.	244½	192	305½	+59.1
Wheat c.i.f. U.K.	£/Ton	30/6/6	32/9/9	27/15/6	-14.5
Maize c.i.f. U.K.	£/Ton	24/11/9	27/13/9	21/3/9	-23.5
Barley c.i.f. U.K.	£/Ton	25/7/-	28/7/9	20/5/-	-28.7
Shellac (Futures)	sh/cwt.	358¾	292½	176	-39.8

Source: The Economist (v.186) Jan. 4, 1958, p.58

Consequently the rise in conference rates of 15-20% could not lead by itself to any significant changes in c.i.f. prices of these commodities. For example in the case of raw jute the 15% freight surcharge, worked out at 31/5d., was equal to 1.4% of the price which prevailed in July 1956.

Under these circumstances it was not expected that the changes which took place in freight rates would significantly influence market prices. In fact changes in the prices of most of the Suez borne commodities were due to factors other than the cost of freight. Immediately after the Israeli attack on Sinai, but particularly after the Anglo-French intervention in Suez prices of all the Suez borne commodities were soaring. For example the price of Indian plain tea rose from 3/6d. per lb. on October 28th to 4/5½d on 9th November. The freight surcharge could not have accounted for more than a fractional increase in such a rise in price, i.e., about ¼d. per lb. Yet market speculations about the future supply positions were quite active and led to sharp increases in commodity prices until the task of clearing the Canal was begun and it became possible to estimate an approximate date for the re-opening of the waterway. Speculations were so effective in fixing market prices especially when the stocks of some commodity were known to be particularly low,

e.g., tin. Another important factor which affected market prices was the sudden interruption of the normal flow of imports in November and then the irregular arrival of shipments in the months that followed. Diagrams 54, 55, 56, and 57 demonstrate the changes which took place in the prices of rubber, tin, tea and copper. It is clear that the most important changes in prices in all the cases had taken place either before or on the eve of the Suez Canal closure. Market speculations had obviously played an important role in these changes. The rise in prices during November and their maintenance at a relatively higher level, in all cases but copper, during December had also been a result of the sudden interruption of imports and the fall in market stocks. Besides these examples there is also some evidence which suggested that the higher prices of Australian meat during January and February 1957 were partly due to the irregular shipping services between Australia and the U.K. after the closure of the Canal.

So far we dealt with all different cases except that of oil. That was the commodity which had been most affected by the Suez crisis and it would be reasonable therefore to explain the changes in its prices in some detail. First, we may examine the influence which freight rates had exerted on prices

DIAGRAM (54).

RUBBER PRICES IN LONDON MARKET.
(Prices of spot rubber sales quoted daily at 5 p.m)
Source:Financial Times,March 14,1957,p.5.

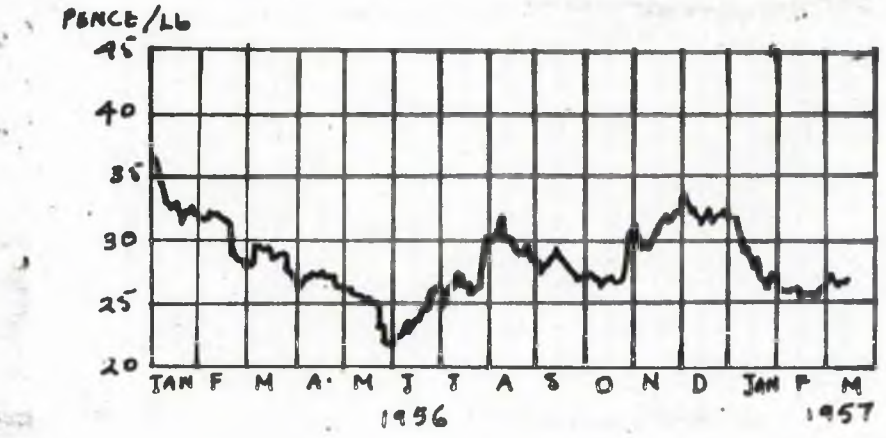


DIAGRAM (55).

COPPER PRICES IN LONDON MARKET.
Source:Financial Times,February 12,1957,p.7.

DIAGRAM (56).

TIN PRICES (CASH) IN LONDON MARKET.
Source:Financial Times ,March 20,1957,p.6.

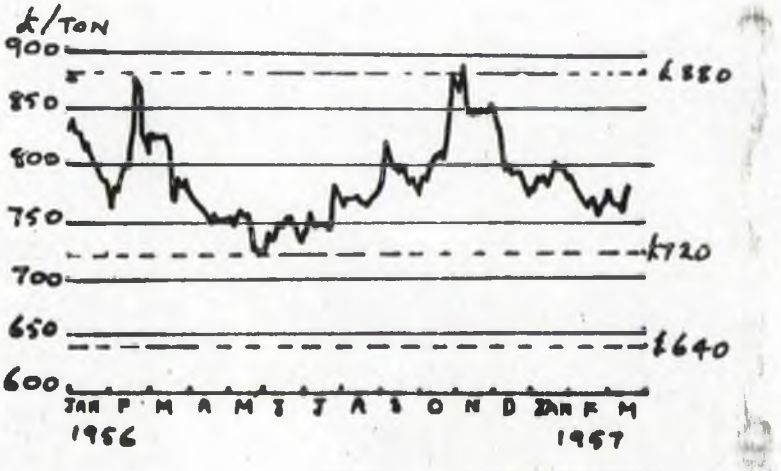
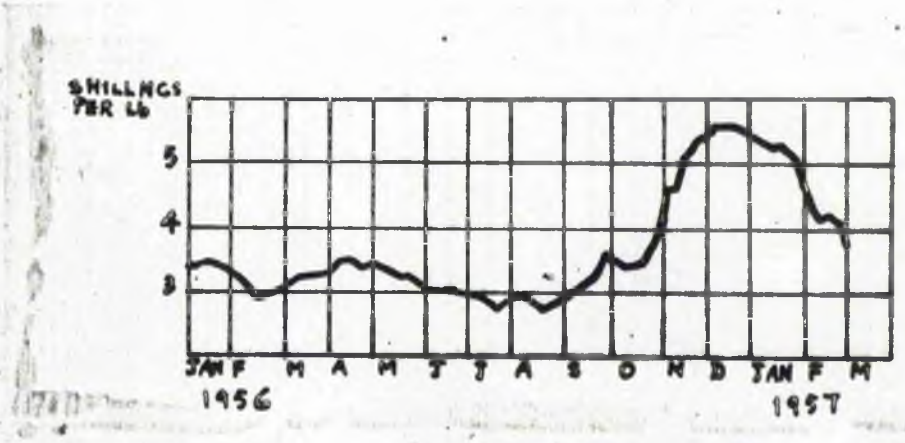


DIAGRAM (57).

INDIAN PLAIN TEA PRICES IN LONDON MARKET.
Source:Financial Times,March 8,1957,p.5.



and then we shall draw an outline for the changes which took place in f.o.b. prices. We have observed in pages 400-402 that the most dramatic changes in freight rates had taken place in the tramp tanker market. Changes in A.F.R.A. rates were relatively much more moderate. Normally about 10% of the oil trade was carried in vessels hired on the spot whereas the rest was carried by oil companies owned tankers or by tankers hired on long-term contracts. Yet during the two months which followed the closure of the Canal a much larger proportion of oil, about 50% of Europe's oil, was carried in tramp tankers hired on the spot. Between October and December 1956 c.i.f. oil prices in Britain recorded an increase of 11.2% largely because of the violent rise in single voyage rates of freight. A.F.R.A. rates recorded no increases between October 1956 and the 1st of January 1957 and f.o.b. oil prices showed only minor changes during that period. The drastic fall in single voyage rates during 1957 was, however, much less important in fixing c.i.f. prices since the dependence on tramp tankers was successively reduced from January onwards.

Delivered oil price continued to rise until April 1957 when it became 40.5% above the level of July 1956 (British prices). The considerable rise in A.F.R.A. rates in the 1st January was fully maintained

during the first quarter of 1957. Also, the cost of freight was still significantly related to the high rates whichprevailed in the tramp market during the last two months of 1956 (i.e. shipping contracts drawn in advance).

Changes in posted prices, f.o.b., must also be taken into consideration if a complete explanation to the changes in c.i.f. prices is desired. The first change in f.o.b. prices was implicit in the substitution of Middle East oil for the more expensive American oil. Such a change in the cost of oil was gradually and increasingly felt with the rise in the percentage of imports from the U.S. Gulf. The pressure of the sudden and large increase in the demand of Western Europe for U.S. crude was, however, bound to raise its price. During November and December 1956 U.S. producers managed to maintain their posted prices at the old level of June 1953. Nevertheless, the demand for oil products in the U.S. was particularly active during the period of the crisis so that an American purchasing company which felt unable to secure sufficient supplies of crude at the old price, voluntarily raised its buying price in Texas by 12%. That was on 3rd January 1957. Immediately the move was followed by other U.S. oil purchasing companies so that within the first week of January posted prices

in all American fields were raised to new levels. The increase in prices varied from 25 to 45 cents per barrel, 9 to 14.5%, according to the degree of gravity of oil and the proximity to the Gulf ports. Subsequently the f.o.b. prices of Venezuelan oil followed the trend established by the U.S. (21)

Persian Gulf f.o.b. prices were maintained at their pre-crisis level throughout the period of the Canal closure. Theoretically speaking Persian Gulf producers were at a competitive disadvantage because of the need to deliver their oil to the Western market via the longer sea route. Therefore their f.o.b. prices should have been lowered to allow for the increased cost of transport to be absorbed and to maintain their market. However, Persian Gulf producers realised that the maintenance of the size of their market west of Suez was impossible even if they had reduced their prices because of the shortage in tanker tonnage and Europe's need to rely on nearer sources of supply. Besides, the major supplying companies of the Middle East with long-term interests at stake could not obviously risk changing their basic prices in response to a short-term emergency.

With the re-opening of the Suez Canal market forces began to operate and soon the link between the Western Hemisphere and Middle East oil prices

(21) Petroleum Press Service, February 1957, p.41-43.

was re-established. Kuwait f.o.b. price was advanced by 13 cents a barrel at the end of May 1957 and soon other exporting ports at the Persian Gulf raised their crude prices by 9 to 17 cents above old prices. It will be noticed from Table (48) that these advances in Middle East oil prices were smaller than those made by Western Hemisphere producers during the crisis.

By the removal of the transport surcharge imposed during the closure of the Canal and by the return to the consumption of the cheaper Middle East oil c.i.f. prices began to decrease. By the beginning of June 1957 crude delivered prices in Europe had become only 6 to 8% above their July 1956 level. See Table (49) for monthly changes in c.i.f. oil prices in Britain.

During the crisis market oil prices in Europe were significantly influenced by the changes in c.i.f. prices as well as by the changes in supplies. In Britain, on the 4th December, retail prices of motor fuel were raised by 1/5d per gallon. The new retail prices for premier grade motor spirit became 6/-½d and for standard grades 5/6½d. The wholesale price of diesel fuel for road vehicles was raised by about 25% to 5/-¾d., whereas the retail price of that group was advanced from 4/1¾d. to 5/6½d. The price of heavy fuel oil was increased from 11½d. to 1/2¾d., a rise of about 31%.

TABLE (48)

A.P.I. Gravity	Oklahoma Kansas (a) 36-36.9°	East Texas (b) 39°	Iraq-Basrah Ex Fao 36-36.9°	Arabian Ex Siden 36-36.9°	Iraq-Kirkuk Ex Tripoli + Banias 36 - 36.9°	Kuwait Ex Mena Elahmadi 31 - 31.9°
Date						
Effective from 15.6.53	2.82	2.90				
29.10.54			1.92 B.P		2.39 B.P	1.72 B.P.
3.11.54				2.39 Mobil		
10.2.56) 11.2.56)			1.87 B.P.	2.46 Mobil	2.46 B.P.	
5.1.57	3.07					
3.1.57		3.25				
8.12.56				(34-34.9°) 2.65 Mobil		
1.12.56				2.69 Esso		
14.3.57					2.69 B.P.	
28.5.57			2.00 B.P.			1.85 B.P

Compiled from Petrol. P.S. 1956 + 1957.

TABLE (49)*

CRUDE OIL IMPORTS AND PRICES c.i.f.

Year	Month	Crude Imports Million Tons	Crude Oil Prices c.i.f.
			£/Ton
1955	July	2.280	8.183
	Aug.	2.511	8.123
	Sep.	2.253	8.110
	Oct.	2.243	8.181
	Nov.	2.174	8.175
	Dec.	2.431	8.297
1956	Jan.	2.285	8.539
	Feb.	2.448	8.444
	Mar.	2.287	8.547
	Apr.	2.533	8.357
	May	2.595	8.271
	June	2.531	8.335
	July	2.537	8.228
	Aug.	3.065	8.491
	Sep.	2.257	8.468
	Oct.	2.617	9.086
	Nov.	1.603	9.171
	Dec.	1.941	10.101
1957	Jan.	1.622	10.394
	Feb.	1.778	10.959
	Mar.	2.275	11.277
	Apr.	2.474	11.562
	May	2.728	10.890
	June	2.451	9.989
	July	2.956	9.588

Source: Basic data compiled from Accounts Relating to Trade and Navigation of the U.K.

Most of the rise in retail petrol prices consisted of an increase in the motor fuel duty, i.e., from 2/6d. to 3/6d. per gallon, in order to re-inforce oil rationing and to provide extra tax revenue to the government during the emergency.(22) The increases in basic prices which oil companies had been allowed to charge were sufficient to cover the rise in c.i.f. prices and the increased cost of distribution due to the supply shortage and the need to operate the distribution system at a reduced scale. The Financial Times(23) reported that the higher cost of ocean transportation had forced oil companies to raise the freight element from 3d. to 5¾d. a gallon on all oil products. Proportionally, therefore, the rise in the cost of transport was higher than the rise in the petrol tax. The cost to industry because of this rise in prices of oil products was estimated as follows:-(24)

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(22) See also Table (50)

(23) "The Financial Times" - See December 5, 1956, or March 16, 1957.

(24) "The Financial Times", December 5, 1956.

TABLE (50)

W. Europe: RETAIL PRICES OF ORDINARY CRUDE MOTOR GASOLINE

Actual or Equivalent in Pence per Imp. Gallon

	1/11/56	1/1/57	Increase
London (a)	49½	66½	17
Dublin	47½	51½	4
Athens	52¾	54¼	1½
Paris	76	83	7
Brussels	50	51¾	1¾
The Hague (a)	38¾	47½	8¾
Zurich	43½	51½	8
Hamburg	57¾	60¾	3
Rome (a)	79¾	88½	8¾
Vienna	46½	46½	-
Stockholm	47	50	3
Copenhagen	51¼	55¼	4
Oslo	53½	55	1½
Helsinki	70½	70½	-
Reykjavik	51½	51½	-
Madrid	86	86	-
Lisbon	61½	68	6½

(a) The increase was chiefly due to higher taxes

Reference: Petroleum Press Service, Vol. 24 - 1957, p.28 (January)

(approximately per annum)	£ Million
All goods vehicles.....	40
British Transport Commission, (including British Road Services £2 m. and London Transport £2 m.)	10 - 12
Agriculture	5 - 7
Steel making	5
Glass Industry	.750
Non-ferrous metals	1
Ceramics	.250

During February and March 1957 the inland supply position was so improving that it was possible to ease measures which were taken earlier for petroleum rationing. The improvement in supplies was consequent upon the increased rate of imports from the Western Hemisphere as well as upon savings made by the Central Electricity Authority and by the steel industry, by the substitution of fuel oil by coal-tar fuels.(25) Moreover on March 19th wholesale prices of petroleum were raised once more. All grades of motor gasoline and all fuel oils were up by ¾d. a gallon; aviation gasoline by ½d. a gallon, white spirit turbine fuel and kerosene by 1d. a gallon and gas/diesel oils were up by 1¼d. a gallon. Retail gasoline prices

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(25) See E.E.C. Europe's Need for Oil, p.77.

were advanced by 1d. a gallon to 5/7½d a gallon for standard grade in the inner zone, 6/1½d for premium grade and 6/5d. for 100 octane grade, which, however, was temporarily off the market. It is not clear whether that rise in prices of petroleum was aimed at encouraging more substitution of coal for oil or as means of protection to available stocks after easing direct rationing measures. Yet, this second rise in market prices of petroleum might also be justified on the basis that c.i.f. prices were still rising by that time. After the re-opening of the Suez Canal lower transport costs made it possible to remove part of the emergency surcharge on selling prices for petroleum products. Yet, the return to the pre-crisis selling prices could not be achieved due to the higher f.o.b. prices of crude which were still maintained.(26) See also Table (51) for the changes in bunker fuel prices.

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(26) A reduction of ½d. per gallon in wholesale prices of gasoline alone was announced on 2nd May 1957. On 18th May wholesale prices of all the major petroleum products were reduced by 1½d a gallon. These reductions were smaller than the increases made in petroleum prices during the Suez closure (e.g. on 18th May 1957 retail prices were 4/4d. per gallon for standard grades gasoline compared with 4/1½ on 4th December 1956, a difference of 2½d per gallon or more than £2.10/- per ton). Prices were again reduced on November 13th 1957 and on February 18th 1958, each time by about ¾d. per gallon.

TABLE (51)

BUNKER OIL PRICES AT U.K. PORTS

Price Shillings/ton.

Yearly Average		Marine Diesel Oil	Marine Fuel Oil
U.K. Chamber of Shipping 1958-59 Report	1949	147/-	102/6
	1950	181/6	129/-
	1951	219/6	157/6
	1952	245/-	172/6
	1953	227/6	147/-
	1954	221/-	142/6
	1955	233/6	149/6
	1956	250/-	167/-
	1957	282/6	204/6
	1958	239/-	165/-

Price Changes in 1956-1957 During July-July	Diesel Oil	Fuel Oil
3rd July 1956	250/6	166/-
19th Oct. 1956	253/6	169/-
10th Dec. 1956	318/-	236/-
10th April 1957	293/-	211/-
23rd May 1957	283/-	199/-
1st July 1957	264/6	187/6

Chambers of Shipping 1956-57 Report

(a) Prices vary 6 cwts. per degree A.P.I. on a gravity scale ranging from below 20° to 40.0° A.P.I. and above.

(b) Flatrate (i.e. no variation for gravity.

The Effect of the Crisis on Imports, Exports and the Balance of Trade.

In the first month of the Canal closure, November 1956, Britain's net imports (i.e. exclusive of re-exports) were lower by £26.7 m. from the corresponding level of 1955 and by £9.7 m. from the monthly average of January-October 1956. This fall was largely due to the delay in the arrival of Eastern traffic due to the sudden closure of the Suez route. Imports of crude oil alone were lower by more than £7m. from the monthly average of the ten months which ended October 1956. Imports from the British Commonwealth countries in Asia, exclusive of the Persian Gulf countries, were lower by about £10 m. from the average of January-October. Britain's imports from Australia showed a considerable growth during November. Australian traffic was normally serviced through the Suez Canal but was re-routed without more difficulty via the Cape and Panama.

British exports continued to increase in the first month of the Suez disruptions. November's net exports (exclusive of re-exports) were £29 m. higher than the average of the first ten months of the year. The rise had been particularly marked in shipments to North America. Yet exports to East of Suez were also buoyant. Net exports to the

Commonwealth countries East of Suez - exclusive of Australasia - were £42.4 m. compared with £37.5 m. the average of the ten months January-October. The closure of the Suez Canal could not affect exports immediately because the required tonnage for November shipments was available at British ports. The situation in December was clearly different. By that time the shortage in shipping tonnage which developed during November as well as the dislocation in shipping schedules had cut down tonnage available for exports. Consequently net exports were £38.2 m. lower than the level of the first month of the crisis. Unlike imports the fall in British exports was not only limited to the region East of Suez. It may be added that the fall in December's exports was partly due to the shorter number of working days in that month. Yet whilst in the first eleven months of 1956 the value of British exports was about 10% higher than that of 1955, exports during December 1956 were almost unchanged from that of December 1955.

The trade returns of the second month of the Canal closure showed a further fall in imports, from £304.8 m. in November to £296.6 m. in December. The latter figure was £28.2 m. below that of December 1955. However, total imports from East of Suez were higher than those of November due to the arrival of the

shipments which were re-routed round the Cape. Total imports from the British Commonwealth countries in East Africa and Asia (inclusive of the Persian Gulf protectorates) were higher by £13.0 m. over the level of November.

As a result of the unusual fall in imports during November 1956 whilst exports continued to increase, the trade gap in that month was greatly narrowed. The figure of November (net imports c.i.f. - net exports f.o.b.) was only about £13 m. compared with about £52 m. the average of the first ten months in 1956. In December the gap was raised to £43.0 m. mainly as a result of the fall in exports.

For 1956 as a whole the trade gap stood at £568 m compared with £356.5 m. in 1955. As it has already been shown a small part of this fall was due to the Suez disturbances which forced a fall in imports higher than that of exports. On the other hand, the trade gap in 1956 was inflated by the rise in import prices, a little more than 2% over 1955, and by the considerable rise in freight rates in the last five months of the year. Normally shipping costs, freight and insurance, accounted for about 10% of the total costs of landed imports. If such a proportion is to be applied to the imports (c.i.f.) of 1955 and 1956 the net trade gap (i.e. imports f.o.b. - exports f.o.b.)

in these years would be £480.3 m. and £194.0 m. respectively. Yet in 1956 liners freight rates were about 6.3% above those which prevailed in 1955 while voyage charter rates were about 50% higher and time charter rates about 33% higher. Therefore, we should expect to find that the freight element had occupied a much higher percentage in the imports value c.i.f. in 1956.

Unfortunately we have no information as regards the actual proportion which freight and insurance occupied in the value of landed imports. In the official statement of the U.K. Balance of Payments imports are normally given in f.o.b. values. Yet for several reasons it is not possible to deduce the freight and insurance elements by comparing directly imports f.o.b. as given in that statement and imports c.i.f. as given in the Trade and Navigation Accounts. (27)

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(27) For a detailed statement on the differences between the figures of imports and exports in the "balance of payments" and those in the "Trade and Navigation Accounts". See the official statement of the "U.K. Balance of Payments" by H.M. Treasury - published annually.

The trade gap as given in the U.K. Balance of Payments (total imports f.o.b. - total exports f.o.b) was £51 m. for 1956 compared with £356 m. in 1955. Although these figures are not strictly comparable with those which we have calculated above (imports c.i.f - exports f.o.b) a comparison between them may roughly indicate the significance of the cost of transport in 1956 imports c.i.f.

In January 1957 landed imports reached £376.5 m., £52 m. above 1956 average and the highest monthly total ever recorded until that time. Exports, on the other hand, were £3 m. above the corresponding figure of January 1956, i.e., £261 m. compared with £258 m., but were £3 m. below 1956' average. Due to that striking rise in imports, generally explained by the dislocations in shipping schedules, whilst exports increased only slightly the trade gap in January increased to £103.9 m. That was the highest monthly average since the dock strike in the mid months of 1955. During the following three months British imports and exports continued to show some unusual fluctuations. For example exports rose in February by £17 m. Nevertheless considering the four months January - April 1957 in total we find that the Suez Canal closure had on the average exerted a very moderate effect on Britain's external trade. See Table (52).

TABLE (52) **

U.K. TRADE

All Figures in Millions of £ Sterling

Commonwealth Countries East of Suez	November 1955	November 1956	December 1955	December 1956	Monthly Average of..... (a) 10 months ended 31st October 1954	(a) 1955	(a) 1956	(b) 12 months ended 31st December 1954	(b) 1955	(b) 1956	Monthly Average c 4 months ended April 30th 1955	1956	1957
(1) East Africa.													
Imp.	6.719	5.755	5.086	9.883	5.210	5.296	5.797	5.218	5.412	6.139	4.581	4.395	5.673
Exp.	8.711	7.349	7.010	4.903	6.357	7.072	6.417	6.210	7.178	6.366	5.705	6.186	4.994
Re-Exp.	0.043	0.038	0.022	0.023	0.027	0.030	.024	0.025	0.031	0.024	0.019	0.025	0.024
(2) Middle East (Aden & Persian Gulf													
Imp.	12.388	8.375	12.514	9.146	12.799	12.698	13.585	12.767	12.590	12.771	13.201	13.359	11.537
Exp.	2.721	2.991	2.845	3.490	3.065	2.214	2.709	2.843	2.308	2.795	2.240	2.613	3.546
Re-Exp.	0.068	0.022	0.041	0.018	0.013	0.049	0.042	0.024	0.049	0.038	0.078	0.045	0.026
(3) Far East													
Imp.	29.693	17.868	34.743	25.823	21.736	27.645	27.019	24.034	28.387	26.141	32.780	29.070	32.747
Exp.	26.243	32.376	26.093	25.946	23.307	24.048	28.771	22.888	24.381	28.832	24.769	28.171	31.439
Re-Exp.	0.439	0.241	0.211	0.287	0.138	0.239	0.331	0.146	0.253	0.318	0.205	0.388	0.264
Total 1, 2 & 3													
Imp.	48.800	31.998	52.343	44.852	39.745	45.629	46.401	42.019	46.389	45.051	50.662	46.824	49.957
Exp.	37.675	42.716	35.948	34.339	32.729	33.334	37.897	31.941	33.867	37.993	32.714	36.970	39.979
Re-Exp.	0.550	0.301	0.274	0.328	0.178	0.318	0.397	0.195	0.333	0.380	0.302	0.458	0.314
Australia													
Imp.	17.423	22.064	29.091	26.868	19.524	21.931	18.762	19.655	21.992	19.672	17.495	22.343	19.770
Exp.	21.981	18.708	22.744	14.005	23.161	23.967	20.729	23.135	23.694	19.982	12.760	10.048	9.968
Re-Exp.	0.166	0.110	0.104	0.107	0.132	0.184	0.116	0.131	0.175	0.118	0.074	0.058	0.054
New Zealand													
Imp.	14.049	15.271	11.525	15.980	14.559	15.544	16.643	14.668	14.993	16.416	25.042	17.863	22.567
Exp.	13.046	11.888	10.656	9.953	10.548	11.570	10.540	10.493	11.606	10.600	25.509	22.473	18.231
Re-Exp.	0.059	0.059	0.044	0.025	0.060	0.070	0.053	0.056	0.068	0.051	0.126	0.116	0.119
Total U.K. Trade													
Imp.	341.452	319.587	335.859	307.856	273.752	321.461	326.513	281.138	323.408	323.843	330.507	327.419	351.507
Exp.	262.244	291.894	253.665	253.702	222.298	239.063	262.718	222.746	242.118	264.295	246.666	257.770	277.137
Re-Exp.	9.963	14.808	10.721	11.210	8.674	9.787	11.997	8.395	9.909	12.204	10.050	13.649	11.848

** Data compiled from Accounts Relating to Trade and Navigation of the U.K.

For example imports c.i.f. from the British Commonwealth in the Far East averaged £32.8 m. per month during that period. This figure was £3.8 m. higher than the corresponding average of January - April 1956. The case was somewhat different with the colonies and protectorates in East Africa. Imports in January - April 1957 showed progress over the corresponding average of 1956, but were still below the average of 1956 (12 months average, see Table). On the other hand imports from the British protectorates in the Middle East area showed a clear sign of decline because of the situation of the oil trade. It must be emphasised, however, that the fall in imports c.i.f. was largely concealed by the sharp rise in freight rates. For example during February 1957 the volume of oil imports from Kuwait was about 26% below that of the corresponding month in 1956, meantime the value of such imports c.i.f. was only 5% lower.

During the period January - April 1957 exports to East of Suez, with the exception of the East African region, (28) showed a remarkable growth. In

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(28) Generally speaking it seems that the trade with East Africa was hindered to some degree by the closure of the Canal and the rise in freight rates, it may be recalled that that rise was most dramatic in this particular case.

fact we find no evidence to indicate that exports, on the average, were hindered by the closure of the Canal during that period. British exports to Asian Commonwealth countries East of Suez were about 15% above the corresponding average of January - April 1956. This rate of growth was about double that achieved for total British exports, taking the same periods into account.

Generally speaking, therefore, the impact of the Suez closure on the trade was much less serious than it had generally been assumed when the disturbances began. Imports and exports had been badly disturbed during the first two or three months of the closure but after that the effect of ship re-routing was less marked. The trade was becoming more settled on the basis of voyages via the Cape after shipping tonnage was effectively increased by withdrawal from the American reserve fleet and the laid-up tonnage. It must be emphasised however that the situation was different in so far as oil trade was concerned. The Canal closure significantly affected that trade by volume and by value, changed the sources of supply and, therefore, burdened the U.K. balance of payments with the dollar area. The latter point is explained in some detail later. The Canal closure also exerted an important effect on the trade gap when that was

calculated on monthly basis. Yet considering the annual value of the U.K. external trade we find that the trade gap in 1956 was not seriously affected by the changes in the imports and exports figures of the last two months. In 1957 the fluctuations in the figures of the first four or five months had by themselves exerted no influence on the annual trade because taken on the whole they presented no change different from the normal trend.

However the statistical trade gap (imports c.i.f. - exports f.o.b.) was significantly influenced by the changes in freight rates. As we have seen the rise in rates in 1956 added considerably to the cost of imports c.i.f. On the other hand the dramatic fall in freight rates throughout 1957 must have had its effect on the trade gap. Yet we have not been able to estimate quantitatively the gross amount of freight charged over British imports during 1956 and 1957 due to the lack of statistics. The effect of the changes in freight and insurance rates on the balance of payments is a different matter and is dealt with separately under British shipping earnings.

One of the amazing facts which the above analysis of 1956-1957 trade figures has shown was the considerable growth of Britain's exports to Asia during the Suez closure. There had been so much fears when the crisis started that the Japanese manufacturers would be given extra advantages over the European in the Asian market because of the closure of the Canal. Yet the fall in freight rates in 1957 and the quick re-opening of the Canal could not hinder the normal growth of the trade.

The Effect of the Crisis on Shipping Earnings.

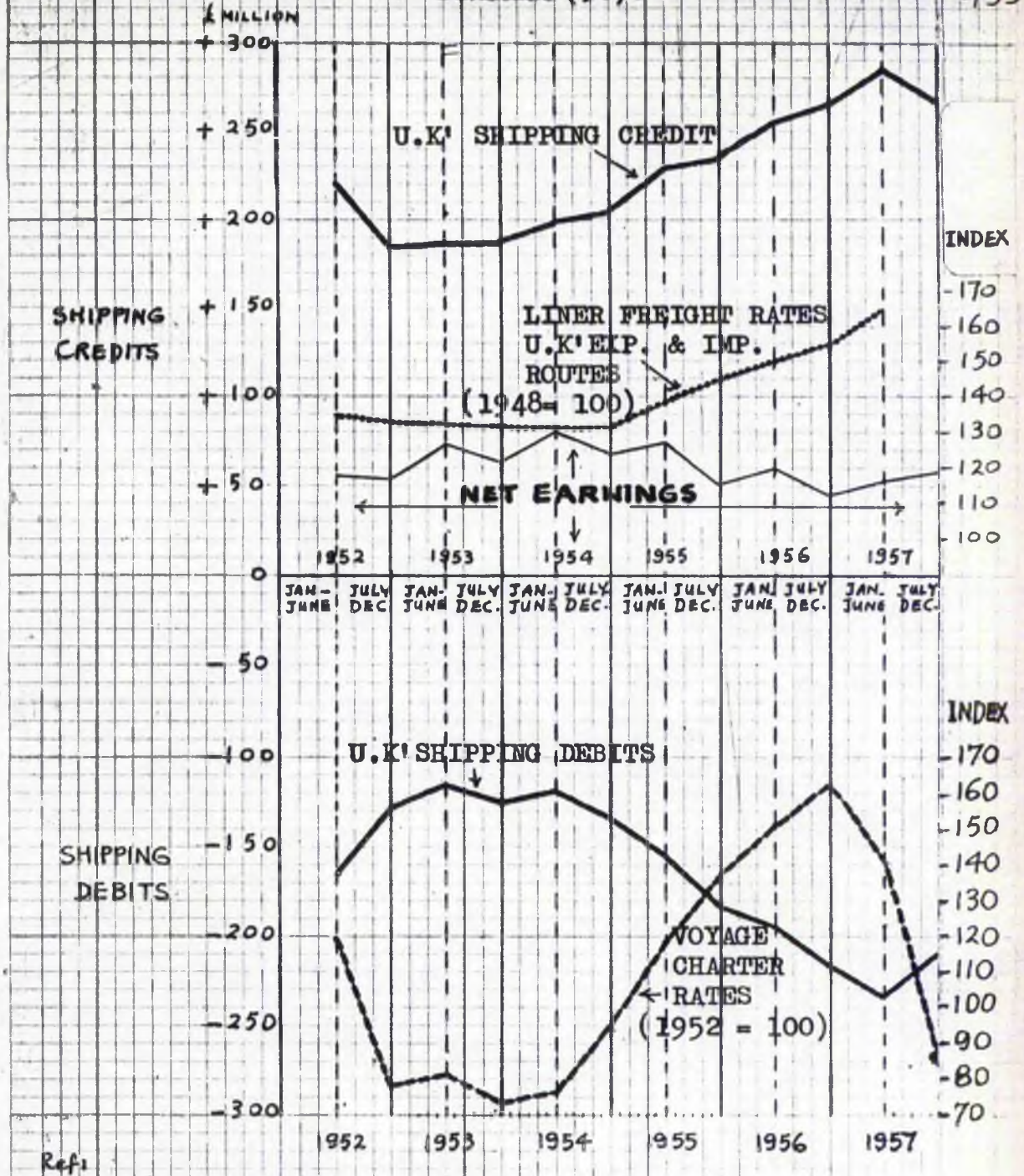
First: Earnings from dry cargo tonnage;

During the post-War period - until 1956 - Britain was always a net exporter and a net earner on dry cargo account by a substantial margin. Nevertheless it would not be reasonable to jump to any conclusions about net earnings during the Suez crisis on the basis of these facts alone. The existence of two separate markets for dry cargo tonnage, i.e., tramp shipping and liners, each with different price mechanisms would necessitate an investigation into the composition of the British fleet. Between the end of the War and 1956 Britain was increasingly relying on the services of the liner fleet in shipping earnings. Such a fleet had therefore kept pace with the growth of world tonnage. On the other hand tramp tonnage had declined from about 3.5 m. tons before the War to 2.5 m. tons in 1956. Thus although Britain remained on the average a net exporter of tonnage she became a net importer of tramp tonnage. In turn shipping earnings were bound to be affected by changes in tramp rates which normally showed violent fluctuations if compared with liner rates.

Diagram (58) shows that during the period 1952-1957 shipping debits (i.e. British shipping disbursements abroad plus payments to foreign shipowners) were adversely correlated, to a very significant degree, to the "sharp" changes in tramp freight rates, i.e., in the second half of 1952 and between July 1954 and December 1956 (Since the diagram shows that liner rates were on the average changing directly with tramp rates it must be emphasised that shipping debits were not by any means adversely affected by changes in liner rates, Britain was a net exporter of liner tonnage - see above). On the other hand changes in shipping credits (i.e. overseas earnings by British ships plus foreign ships disbursements in the U.K) were clearly as the diagram demonstrates directly correlated to liners more than to tramp freight rates. However, it must be made clear that since the British fleet consisted of liners as well as tramp ships shipping credits were bound to be increased by any rise in freight rates whatever its source, and vice versa. Normally there would be many factors other than freight rates which would also determine shipping earnings. But as we observe from the above picture freight rates had obviously played a significant role. The diagram shows that shipping debits were only reduced when tramp rates were depressed. On the other hand violent

increases in tramp rates - particularly in periods when a higher degree of dependence was placed on tramp tonnage such as the second half of 1956 - resulted in greater payments to foreign tramp owners. And (given a certain period of time), when liner rates were not increased as greatly as tramp rates, net earnings were effectively reduced. That was exactly the situation in 1955 and in 1956. In the latter year, as it has been explained earlier, the rise in tramp rates was continued above the high level of 1955 and then was dramatically intensified during the Suez crisis. Table (53) shows that net earnings declined by £26m. and £18m. in 1955 and 1956 respectively. The smaller fall in net earnings in 1956 compared with 1955 - was mainly due to the fact that liner rates were stronger in the year of the Suez crisis. In the first half of 1957 we can clearly see that the strength of liner rates whilst tramp rates were falling led to a rise in net earnings. Yet that rise was only a moderate one because shipping debits were still correlated to the high tramp rates which prevailed after the Canal closure, i.e., many ships were chartered a few months in advance especially during the panic which prevailed among charterers immediately after the closure of the Canal. See also Table (54) which shows the U.K. net shipping earnings with principal trading areas. In the light of the

DIAGRAM (58).



Ref:

U.K BALANCE OF PAYMENTS.

TABLE (53)

NET EARNINGS (TOTAL). Figures in £m.

	JAN-JUNE	JUL-DEC	
1952	+56	+54	+110
1953	+72	+62	+134
1954	+80	+69	+149
1955	+73	+50	+124
1956	+60	+45	+105
1957	+52	+58	+110

TABLE (54)

U.K. SHIPPING EARNINGS (NET) WITH PRINCIPAL TRADING AREAS

£ mil.

	Rest of Sterling Area.		Dollar Area		O.E.E.C. Countries	
	Jan - June	Jul - Dec.	Jan - June	Jul - Dec.	Jan - June	Jul - Dec.
1952	+66	+51	+4	+5	-26	-12
1953	+54	+50	+13	+11	-3	-11
1954	+55	+56	+16	+16	-2	-12
1955	+62	+62	+15	+ 8	-13	-27
1956	+65	+67	+19	+17	-34	-51
1957	+69	+68	+19	+19	-58	-49

Source: "U.K Balance of Payments 1946-57", 1959.

above analysis it would be easy to deduce that the foreign owners of tramp ships which served the British trade were mainly within the O.E.E.C. group of countries.

Second: Tankers Earnings:

In tankers also Britain was a net earner. It was estimated in 1956 that Britain was a net exporter of about 30% of her tanker tonnage, which by then counted for about 19% of the world tanker fleet.

Most of Britain's tanker fleet was owned by British oil companies and employed on long-term charters. Thus from this angle the rise voyage charter rates (tramp tankers) during 1956 must have had an adverse effect on net earnings. Also, such an adverse effect must have been seriously unfavourable during November and December in particular because: (a) A.F.R.A. rates were kept donstant, and (b) a much larger proportion of oil trade was carried in tramp tankers. Again in 1957 the situation was very similar to that one that has already been drawn for non-tankers.

The analysis here can not go further, however, since statistics for payments and receipts in respect of oil tankers were never given separately in the U.K Balance of Payments or in any other documents. Tankers earnings were always given together with many other items and these cannot be separated without the official help of the Treasury.

The Effect of the Suez Crisis on Sterling and the Gold and Dollar Reserves.

Immediately after the nationalisation of the Suez Canal Sterling was strongly affected by the uncertainties about the future of the British Eastern trade and by the fears that Britain might become involved in a Middle East war. Diagram (59) shows that the transferable Sterling rate of exchange against the dollar was quite sensitive to the political development of the Suez crisis. The rate fell heavily during August and early September and then recovered when the Suez question was referred to the U.N. and it looked as if a Suez war had been averted. Nevertheless with the re-appearance of war clouds in late October transferable Sterling fell again. The fall was however most dramatic during the actual fighting which took place in the Canal zone; the rate fell under $2.74. The diagram shows that the fluctuations in the spot rate of exchange were very moderate relatively. Yet this situation was due to the official measures given to Sterling throughout the crisis to prevent it from falling below $2.78¼. It must be emphasised however that the changes in the Sterling rates of exchange were not only governed by market speculations about the

prospects of war and about the possible effect of the crisis on the British balance of payments. Other factors such as the freezing of the Egyptian Sterling account at the Bank of England had also unfavourably affected the situation of the British currency. To circumvent the move taken by the British government and to show their sympathy with the Egyptians, the Chinese made substantial sales of their transferable Sterling in Zurich market and obtained Swiss francs which were forwarded to help Egypt in financing her external trade. Besides, some other friendly countries with Egypt were anxious to withdraw their Sterling accounts which they held in Britain lest these might be also blocked if the Suez dispute developed seriously. Taking into account the large holdings of the Middle East countries, the effect of this attitude on the pound was specially serious. Withdrawal of Sterling balances from London was particularly active during August and early September. Yet there had also been heavy selling of Sterling on the part of these countries after the November cease fire in the Suez zone. The Economist (November 17, 1956) wrote: "Some of the pressure on Sterling within the last ten days has been due to heavy selling from Middle Eastern quarters. The shieks have been running down their Sterling balances and the conversion to dollars has been

effected through the transferable market, where the rate for Sterling in terms of dollars dipped towards the end of last week to $2.73, then recovered to $2.74½, but has again weakened to $2.73½."

Another factor which affected the dollar reserves throughout the closure of the Suez Canal was the additional dollar payments for Western Hemisphere oil. In 1956 and 1957 crude imports from the U.S. were increased by £5.2 m. and £22 m. above the level of 1955. Imports of oil products (as a result of the shortage in crude supplies) were increased by £2.3 m. and £26.0 m. above the level of 1955 in 1956 and 1957 respectively. Thus altogether oil imports from the U.S. were increased bt £7.5 m. and £48.0 during 1956 and 1957 because of the closure of the Canal and the I.P.C. pipeline. These imports, in distinction from others which came from the rest of the Western Hemisphere, were paid in dollars. It may seem strange to add such a statement but in fact agreements among international oil companies were very effective in breaking down the currency barriers. In 1956 and 1957 imports of oil from Venezuela were increased by £4.5 m. and £25.5 m, respectively, above the level of 1955. These increases were also due to the Suez circumstabces but it is not known to us how large was the dollar component when payments were made to

Venezuela. In fact, in the absence of any official estimate for the net dollar cost in oil imports it is not possible to measure exactly the drain in the reserves consequent upon the purchase of oil from the dollar area - instead of the Middle East - during the Suez crisis.(29)

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(29) Official statistics gave no specific information either on this matter or on the contributions which British oil companies and British tankers made to dollar earnings. See for instance the "Economist", April, 13, 1957, "Oil in the Dark". During the period of the Canal closure some estimates appeared in the Press about the additional dollar payments for oil imports from the Western Hemisphere, yet these varied between £30 m. a month (the "Economist", Feb, 9, and May 18, 1957) and £40-50 m. a month, (Petroleum Press Service, Jan. 2, 1957). Although it was admitted that these estimates were subject to error, it should be added that they were made at the beginning of the crisis when it was wrongly assumed that most of the gap in Middle East crude imports would be covered by crude imports from the U.S. and Venezuela. Smaller amounts of crude oil than expected came from the U.S. and instead came larger imports of the more expensive oil products. Also estimates of the dollar cost at beginning of the crisis could not, however, take into account the substantial rise in c.i.f. prices.

Additional dollar payments to the Western Hemisphere and the withdrawal of some of the sterling balances in Britain by Middle Eastern countries exerted a direct effect on the reserves. Yet, more important in affecting the position of the reserves was the fall in the Sterling rate of exchange. That was due to the considerable amounts of short-term funds which were normally attracted to London to take refuge in Sterling as a world reserve currency.

During the first half of 1956 gold and dollar reserves were building up at a remarkably higher rate than that of 1955. By the end of July reserves stood at their best for 1956 when they amounted to £2,405 m. Following the nationalisation of the Canal and the subsequent events the drain in the gold and dollar reserves was quite notable; by £129 m. in August alone. The official figure for September showed an improvement in the reserves by £52 m., but that was superficial. What had concealed the true situation was the sale of Trinidad Oil Co. to U.S. interests which added to the reserves £177 m. during September. If that sum was left out of the reckoning September's figure would have recorded a deficit of £125 m.

The most dramatic fall in the gold and dollar reserves came during November, i.e., by $279 m. But even this high figure was underestimating the actual fall because of the receipt of $30 m. from the sale of over half of the Treasury's holding of U.S. government bonds and also because the settlement with the European Payments Union, $28 m. was one month in arrear.

During December the situation was changing. The withdrawal of the British troops from the Canal zone was a decision that the U.S. government had strongly recommended and thus once it was taken it paved the way for receiving American help. $500 m. credit from the Export - Import Bank was made available to Britain to finance purchases of specified goods from the U.S. Traditionally the Bank confined its credits to the purchase of American capital goods, but under the circumstances of Suez purchases of oil, coal, wheat, tobacco, steel and oil from Venezuela were covered. The second re-inforcement to Britain's gold reserves and currency came on the 10th of December when the government announced that $561.5 m. had been drawn from the I.M.F. The sum comprised Britain's gold tranche of $236.5 m. and 25% of her quota in the Fund, i.e., $325 m. Moreover the I.M.F. released the whole of the remainder of the British quota, i.e.,

$738.5 m., as stand-by credit. The reserves' third reinforcement came about by invoking the waiver on the interest due on December 31 on the American post-war loans. Britain paid U.S.A. $72 m. of principal on the loan of 1945/6, but asked for cancellation of $104 m. of interest payments. A new agreement was negotiated. By it U.K. could postpone until the early years of next century and at 2% per annum both principal and interest. But it could not do so on more than seven occasions; and it promised not to do so in the immediate future. In fact it used the escape provision for 1956 and 1957.

After taking into account the $561.5 m. loan taken from the I.M.F. and the defence aid December reserves showed a surplus of $168 m. Otherwise there would have been a deficit of $218 m. in the reserves of that month. However the situation was greatly improved after the strong measures taken in December by the government to reinforce the reserves and restore confidence in the pound. There was only a small fall in the reserves during January 1957 and then during the rest of the period of the Canal closure the situation was showing a continuous surplus.

Nevertheless after the crisis had gone it became a matter of paying back the debts to the I.M.F. and to the U.S. See Table (55) for changes in Britain's gold and dollar reserves during the crisis compared with other periods. See also Diagram (59) for improvement in the Sterling rate of exchange after December's measures were taken.

TABLE (55)

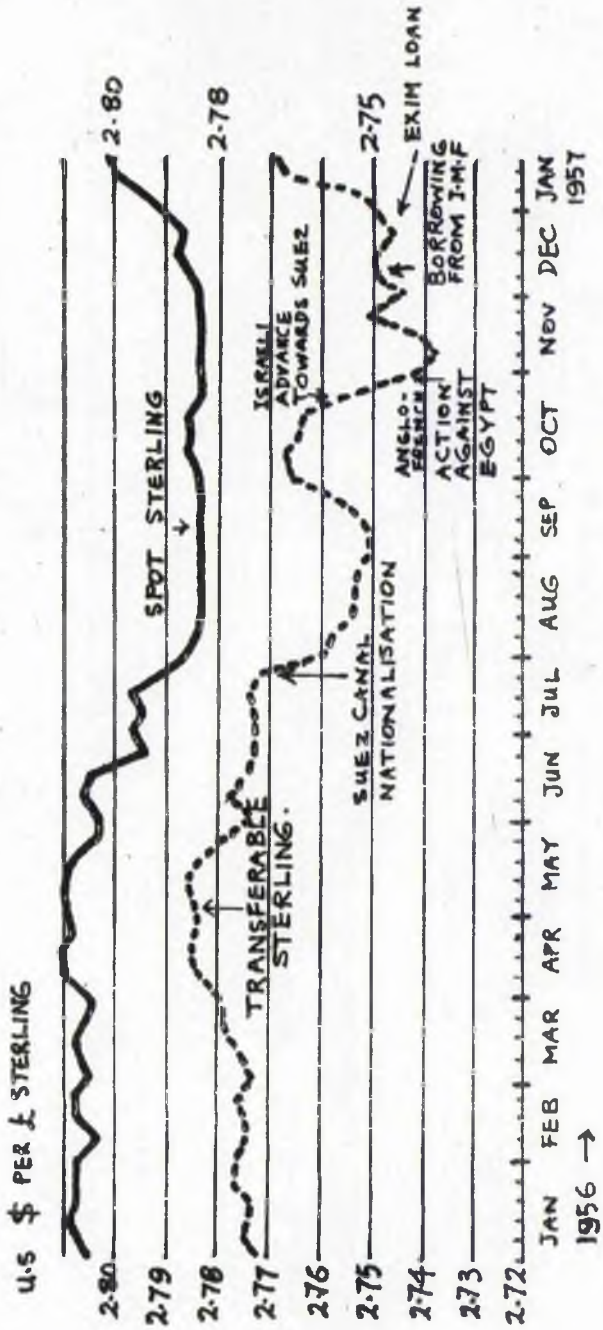
BRITAIN'S GOLD AND DOLLAR RESERVES.

	Changes in Reserves (Millions of U.S. $)	Reserves at and of Period (Millions of U.S. $)	= (Millions of £ Sterling)
1950	+1612	3300	1,178
1951	- 965	2335	834
1952	- 489	1846	659
1953	+ 672	2518	899
1954	+ 244	2762	956
1955	- 642	2120	757
1956			
First Quarter	+ 157	2277	
II Quarter	+ 108	2385	852
III Quarter	- 57	2328	
October	- 84	2244	
November	- 279	1965	
December	+ 168	2133	762
1957			
January	- 49	2084	
February	+ 63	2147	
March	+ 62	2209	
First Quarter	+ 76	2209	
Second Quarter	+ 172	2381	850

Source: U.K. Balance of Payments 1946-1957 (H.M. Treasury)
The Banker, Vol. 107 II, 1957

DIAGRAM (59).

STERLING DURING THE SUEZ CRISIS 1956/57.



Source: With some variations, the diagram is taken from the FINANCIAL TIMES, Jan. 23, 1957, p.1.

Page Number omitted in error.

The Suez Settlement

Conditions for re-opening of the Canal as given by the new Egyptian administration emphasised that the principles of free navigation as outlined in 1888 Convention would be respected, and that dues would be levied in the same way as before nationalisation. The Canal users were also assured that at least the same proportion of dues would be spent on improvement project as under the old company.(30)

Total costs involved in clearing the Canal from blockships and other hindrances to navigation were 8.4 m. dollars. By resolution of U.N. (which supervised salvage operations) merchant ships passing through the Suez Canal on and after September 15th, 1958 had to pay a surcharge of 3% above rates of dues. The "Banque de la Societe General de Belgique" was appointed agent of the U.N. for collection of the Suez surcharge. It was estimated that by this means about 3 years would be required to recover the cost of clearing the Canal. The decision to impose that surcharge over shipowners who contributed nothing in the blocking of the Canal were certainly adopted by the U.N. for political expediency, i.e., to avoid further extension in the Suez crisis. However, it

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(30) Memo published by the Egyptian government, March 19th, 1957.

must be mentioned here that most of the world maritime nations including Britain had re-imbursed their shipowners for the amounts of the Suez surcharge.

The Canal Company's Compensation.

When the Egyptian government decreed the nationalization of the Suez Canal company it offered to compensate the shareholders on the basis of Paris Bourse' closing prices on 25th July 1956. This meant a total payment of about £71 m., or about £15 m. more than the value of the company's assets held outside Egypt.(31) The company's counter compensation claim was a sum of £204 m., the largest item in which was £120 m.: estimated loss of profits on the 12 years' period which remained in the concession (i.e., between 1956 and 1968).(32) Besides, the company flatly denied the Egyptian government's right in assets held outside Egypt. Eventually with the mediation of the World Bank the disputing parties came into agreement which in fact was not fundamentally different from the original Egyptian offer. The company kept its assets outside Egypt and received in addition £E.28.3 m.

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(31) Figures from The Economist, May 3, 1958.

(32) Figures from The Economist, Nov., 16, 1957.

or about £29 m. sterling. In addition the company accepted a liability for the pensions of all ex-Canal employees who left Egypt, that was estimated by them at £13 m. sterling.

About the payments of the compensation it was agreed that 40% at least should be made in sterling. The payments were also freed from risk of changes in exchange rates by stating a fixed exchange rate of $2.6715576 to £E.(33) With the acceptance of these terms the Suez Canal company was finally liquidated and a new finance company (the Suez Finance Co.) was created to receive and distribute the compensation as well as to invest some of the remaining assets in new business. The Suez Canal Company stockholders were mainly French and British but there were others in Switzerland, Belgium, Holland and the U.S. The British government which owned 44% of the Canal shares up to the Second War had sold a portion in the market in the post-war period. The remaining holding of the government by the time of the nationalization was about a third of the total Canal shares. It is worth mentioning that dividends and interests which the British government obtained from the Suez

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(33) The Economist, July 12, 1958.

Canal shares (purchased by Disraeli in 1875 at the sum of £4 m.) totalled about £38 m. up to 1932. Further £14.5 were received before the Second War had reduced the Canal profits to nil, and about £28 m. during the period 1946-1956.(34)

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(34) Annual dividends from the Suez Canal shares were given annually in Parliamentary Accounts and Papers - See under "Financial Accounts of the U.K. & Suez Canal.

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THE ECONOMIST, and the FINANCIAL TIMES for the period

APPENDIX E

STATISTICAL TABLES AND DIAGRAMS

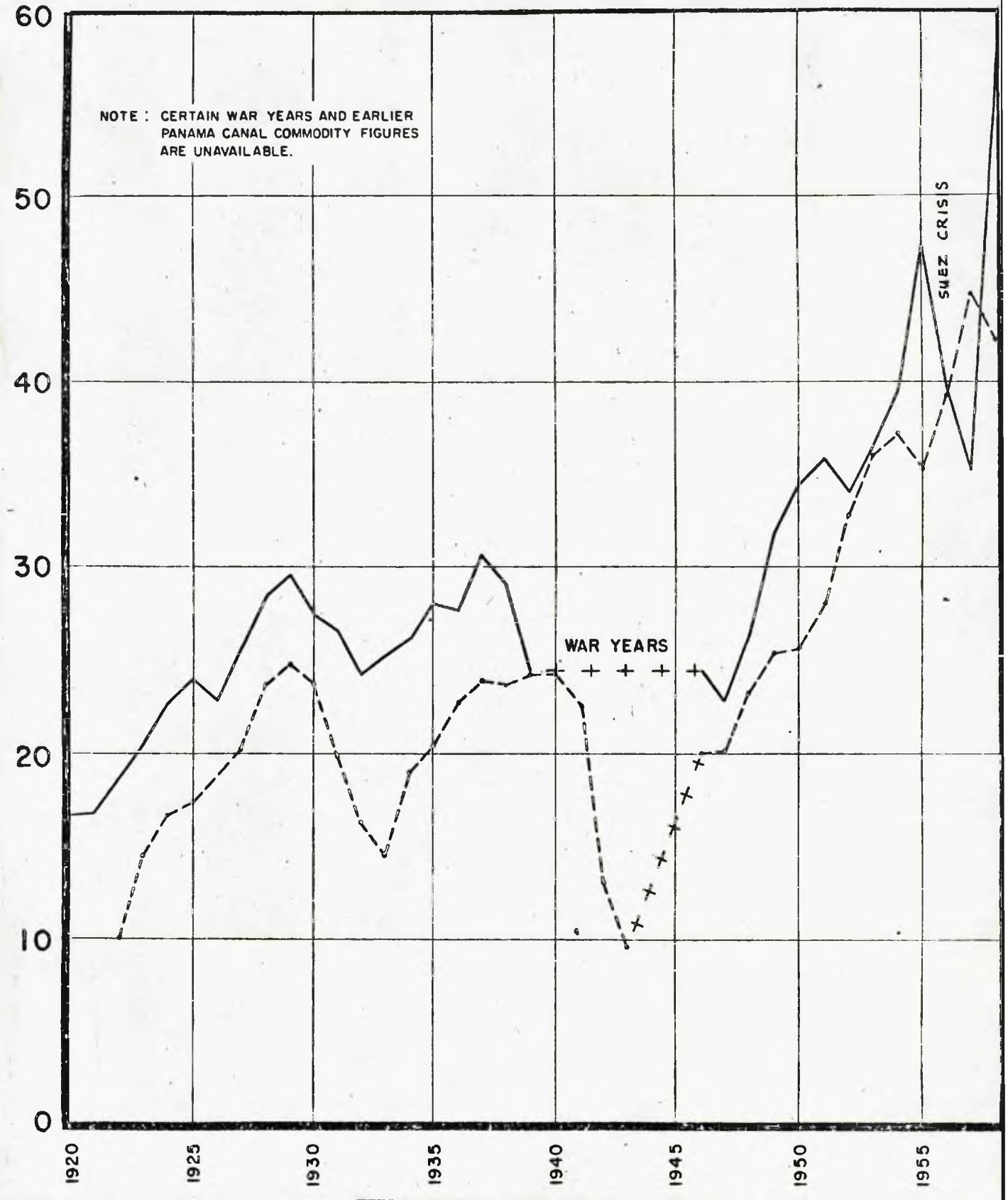
* Panama Canal - Suez Canal, Annual Net Tonnage. 1914 - 1955 and 1870 -1955.

* World Tonnage By Flag. 1939 - 1958.

PANAMA CANAL - SUEZ CANAL

ANNUAL NET TONNAGE (APPENDIX E) (DIAGRAM 1)

(EXCLUDING PETROLEUM & PRODUCTS)*



*Petroleum &Products are excluded since there was no competition between the two canals over this traffic. [SEE DIAG. 2]

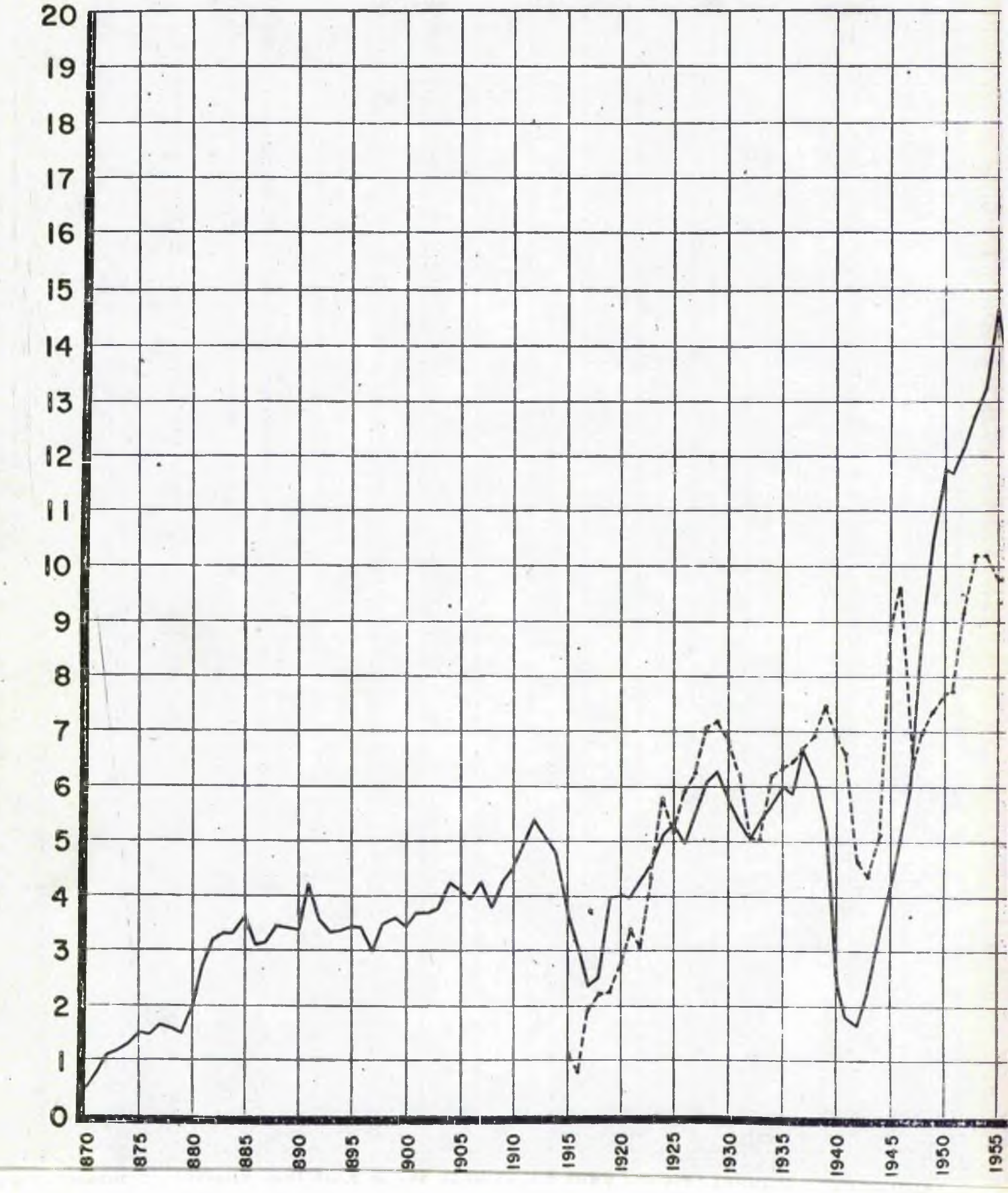
SOURCE; GENARL COMPARATIVE STATISTICS OF THE PANAMA AND SUEZ CANALS - PANAMA' PUBLICATIONS.

PANAMA CANAL - SUEZ CANAL

ANNUAL TRANSITS

SINCE OPENING DATES

(APPENDIX E)
(DIAGRAM 2)



(APPENDIX E)
TABLE 1

WORLD TONNAGE BY FLAG 1939, 1948-58.
STEAM AND MOTOR VESSELS OF **500 g.t. and over** EXCLUDING LAKE AND RIVER TONNAGE AND MISCELLANEOUS CRAFT, E.G. TUGS, TRAWLERS, ETC.
GROSS TONS (000)

	3 Sept.	31st December				
	1939	1948	1949	1950	1951	1952
United Kingdom ..	16,892	16,046	16,321	16,557	16,526	16,600
Canada	358	1,807	1,584	1,494	1,435	1,376
Other British Countries.. ..	1,358	1,396	1,477	1,575	1,607	1,719
British Commonwealth ..	18,608	19,249	19,382	19,626	19,568	19,695
Argentine	246	677	744	826	951	973
Belgium	386	407	435	459	462	460
Brazil	446	676	675	636	669	781
Coste Rica	—	3	4	15	86	106
Denmark	1,093	1,037	1,127	1,170	1,263	1,322
Finland	553	446	463	497	547	566
France	2,748	2,462	2,686	2,880	3,122	3,371
Germany	4,185	141	93	509	854	1,203
Greece	1,763	1,298	1,334	1,306	1,259	1,223
Honduras	84	388	476	581	435	453
Italy..	3,322	2,085	2,373	2,615	2,937	3,229
Japan	5,427	1,200	1,200	1,200	2,200	2,751
Liberia	—	1	164	353	709	1,060
Netherlands ..	2,792	2,640	2,789	2,908	3,005	3,053
Norway	4,686	4,213	4,809	5,223	5,582	5,765
Panama	722	2,843	3,037	3,350	3,658	3,816
Portugal	213	422	440	406	426	451
Russia	1,154	1,250	1,059	1,141	1,192	1,232
Spain	932	985	971	971	983	1,015
Sweden	1,442	1,841	1,893	1,919	2,061	2,257
United States† ..	8,722	26,199	26,045	25,793	25,726	25,669
Other Countries ..	1,902	2,308	2,710	2,700	2,765	2,931
Total	61,426	72,771	74,909	77,084	80,460	83,382
United States Reserve Fleet included†..	—	13,070	14,811	14,213	9,530	13,274

† Vessels of 1,000 gross tons and over.

SOURCE: CHAMBER OF SHIPPING OF THE U.K. ANNUAL REPORT 1958-1959.

APPENDIX E

TABLE 1 (cont.)

WORLD TONNAGE BY FLAG—(*cont.*).

Gross Tons (000)

	31st December					
	1953	1954	1955	1956	1957	1958
United Kingdom	16,832	17,286	17,549	17,828	18,363	18,758
Canada	1,213	1,108	1,013	1,005	835	797
Other British Countries ..	1,784	1,885	2,057	2,208	2,467	2,552
British Commonwealth	19,829	20,279	20,619	21,041	21,665	22,107
Argentine ..	974	968	965	966	967	970
Belgium ..	453	473	501	528	578	658
Brazil	807	813	820	838	832	844
Costa Rica ..	179	263	448	508	510	547
Denmark ..	1,406	1,469	1,561	1,656	1,844	1,970
Finland	583	667	729	746	788	762
France	3,512	3,559	3,782	3,838	3,935	4,253
Germany ..	1,670	2,045	2,506	3,020	3,424	3,950
Greece	1,182	1,257	1,299	1,459	1,569	1,889
Honduras ..	413	431	395	364	358	208
Italy	3,333	3,705	3,867	4,192	4,640	4,876
Japan	2,969	3,350	3,586	3,952	4,625	5,488
Liberia	1,619	3,206	4,504	6,405	9,187	11,102
Netherlands ..	3,091	3,103	3,440	3,801	4,150	4,344
Norway	5,962	6,308	7,124	7,794	8,497	9,582
Panama	3,942	3,980	3,933	4,028	4,293	4,428
Portugal	450	463	465	456	454	479
Russia	1,392	1,704	1,934	2,140	2,412	2,654
Spain	1,039	1,073	1,126	1,208	1,267	1,337
Sweden	2,384	2,500	2,638	2,836	3,033	3,301
United States† ..	25,835	25,483	25,250	24,013	23,725	23,840
Other Countries	3,080	3,331	3,443	3,613	3,920	4,383
Total	86,104	90,430	94,935	99,402	106,672	113,972
United States Reserve Fleet included† ..	13,934	14,437	14,679	13,523	13,864	14,500

† Vessels of 1,000 gross tons and over.

Table 1 (cont.)

CHAPTER IX

ATTEMPTS TO REDUCE DEPENDENCE ON OIL IMPORTS THROUGH SUEZ DURING THE DECADE FOLLOWING THE 1956-57 CRISIS.

After the Suez crisis had passed it became widely accepted in Western European countries that serious considerations must be given to any measures which might minimize their vulnerability to interruption in the flow of oil. The O.E.E.C.'s Oil Committee recommended in particular the following measures to the European governments:

a) the accumulation of larger reserves of oil in Europe than have been held hitherto;

b) the further development of flexibility in the means of transport by alternative routes and in refinery operations;

c) means of inducing further diversification of source of supply;

d) mutual consultation and appropriate planning by government and industry, taking account of consumer's interest, to place Europe in a better position to overcome a temporary drop in oil supplies or interruption of transit facilities. (1)

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(1) Europe's Need for Oil - Implications and Lessons of the Suez Crisis, O.E.E.C., p.44.

Of these measures the most important for our purposes here are the second (b) and the third (c). It is clear that the importance of the Suez Canal as an oil route could be reduced either by placing less reliance on Middle East oil or by channeling this oil traffic via alternative routes, i.e., via direct pipelines to the Mediterranean Sea and/or via the Cape route. Hence, it is our intention in this chapter to investigate Britain's success in reducing relative reliance on Middle East oil and/or in placing less dependence on the Suez Canal for oil shipments which came from that source.

The growth of British oil imports from the Middle East.

When it was generally suggested that oil supplies from the Middle East should be cut down or should be developed at a lower rate than had been held previously nobody, whether in Britain or elsewhere, was decisive of how this would be accomplished. The development of oil fields in the African deserts was still far from foreseen. Demands that European governments should encourage "industry's search for possible (energy) deposits in Europe and elsewhere"(2) were reasonable in the light of the Suez crisis but

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(2) Previous reference p. 43

it was obvious that they did not offer any quick positive solution.(3)

During the Suez Canal closure oil from the U.S. and Venezuela played a major part in helping to meet Europe's deficiency in Middle Eastern supplies. Yet, in the second half of 1957 imports from these sources were drastically cut down, although those from Venezuela were still above the pre-Suez crisis level. Obviously the Western Hemisphere could not be regarded as a permanent source of oil to Europe because of the extra dollar payments involved in this way. Furthermore with the rapid growth of oil consumption in U.S. it was doubtful that any sufficient surplus from this source would be available for European consumption in case of a crisis like that of 1956-57 would occur in future.(4) Indeed it became clear in the immediate post-Suez period that any search for a substitute to the "Middle East oil" was in fact a search for sources of energy other than "oil". Recognizing the need to

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(3) In Britain production of crude oil was still very small (rose to 82,000 tons in 1957 against 66,000 in 1956) and it was not expected that this or natural gas production (negligible by then) would change significantly during the decade 1957-1966.

(4) See Europe's Need for Oil, O.E.E.C., p.44.

work for a new energy policy the British government emphasised that the contribution from indigenous sources of energy must be expanded as much as possible. (5)

Table (56) analyses Britain's fuel consumption during the years 1954-1964. In 1955 Britain was still principally dependent upon coal for her energy requirements. Section (a) in the Table shows that in that year net coal consumption was equal to 213.5m. tons or 85.7% of total energy consumption, whereas oil accounted for 34.5m. tons or 13.9% of total. On the other hand about half of one per cent of energy consumption was provided by nuclear and hydro electricity and natural gas. This pattern was more or less the same in 1956-57 where oil supplied about 14%, or a little over, of total energy requirements in Britain and coal provided the rest in forms of coal, coke, gas and electricity. That was the main reason which prevented the interruption in oil imports during the Suez crisis from causing any major dislocation to home industry. For instance a reduction in oil consumption by 10% or 20% as happened during the Suez crisis 1956-57 meant a reduction of about 1.5% or 3% in total energy supply

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(5) See Petroleum Press Service, June 1957, p.229.

Total inland fuel consumption

Primary fuel input basis

TABLE 56

Million tons of coal or coal equivalent(1)

	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
Gross coal consumption	213·8	215·2	217·5	212·9	202·4	189·4	196·7	191·8	191·2	194·0	187·2
less exports and stock changes of coke and manufactured fuel	1·4	1·7	3·5	5·3	3·8	2·8	1·2	1·8	0·3	0·2	0·6
Net coal consumption	212·4	213·5	214·0	207·6	198·6	186·6	195·5	190·0	190·9	193·8	186·6
Petroleum(2)	30·9	34·5	37·5	36·7	47·2	56·1	65·5	71·0	78·6	85·3	93·3
Nuclear and hydro-electricity and natural gas.(3)	1·3	1·0	1·3	1·7	1·7	2·1	2·7	3·3	3·7	4·5	5·4
Total fuel consumption	244·6	249·0	252·8	246·0	247·5	244·8	263·7	264·3	273·2	283·6	285·3
Analysis of type of fuel(4)											
Coal (direct use)	116·7	113·8	110·9	105·1	99·2	91·3	91·1	84·4	81·3	77·6	70·1
Coke and breeze	32·2	33·0	33·3	32·2	29·9	27·7	31·5	29·6	28·2	28·6	29·5
Other solid fuel	1·4	1·4	1·5	1·7	2·0	1·6	1·4	1·5	1·5	1·6	1·3
Coke oven gas	2·3	2·3	2·4	2·5	2·4	2·1	2·6	2·5	2·1	2·1	2·5
Town gas	17·7	17·7	17·6	16·7	16·7	16·0	16·1	16·1	16·7	17·6	18·1
Electricity	42·8	45·8	49·1	50·7	53·8	57·0	64·5	69·1	75·3	81·1	83·5
Other fuels (direct use)(5)	1·8	1·8	2·0	2·3	2·0	1·8	2·1	1·7	1·9	2·0	1·7
Petroleum (direct use)	29·7	33·2	36·0	34·8	41·5	47·3	54·4	59·4	66·2	73·0	78·6
Analysis by class of consumer											
Collieries	11·6	11·0	10·3	9·8	9·3	8·4	7·8	7·3	7·1	6·9	6·6
Petroleum refineries	3·6	3·7	4·0	3·9	4·6	5·6	6·1	6·5	6·8	7·2	7·4
Agriculture	2·8	2·9	3·1	2·9	3·2	3·1	3·3	3·6	3·8	4·0	3·9
Iron and steel industry	31·6	32·5	33·7	34·1	30·7	29·6	34·8	33·0	31·2	32·6	36·1
Other industries	71·1	73·0	73·7	72·3	71·3	72·2	77·2	78·4	79·7	80 8	83·8
Railways	14·7	14·0	14·1	13·5	12·6	11·6	11·0	10·5	9·3	8·4	7·2
Road transport	12·7	13·5	13·9	12·9	14·7	15·9	17·3	18·5	19·5	20·7	23·0
Water transport	2·2	2·2	2·3	2·2	2·2	2·2	2·2	2·2	2·4	2·3	2·2
Air transport	2·5	2·9	3·0	2·8	2·7	2·8	3·0	3·7	3·6	3·8	3·9
Domestic	66·1	66·3	68·0	65·7	69·0	66·7	71·5	72·6	78·7	83·3	78·7
Public administration	10·7	11·1	11·2	10·7	11·6	11·1	12·0	11·3	12·5	13·4	13·3
Miscellaneous	15·0	15·9	15·5	15·2	15·6	15·6	17·5	16·7	18·6	20·2	19·2

Table (56)

1- One ton of petroleum (including all petroleum gases and liquid fuels from coal) = 1.7 tons of coal.For other conversion factors used in the table see Annual Abstract of Statistics,1965,p.137.
2-Deliveries for inland consumption.Liquid fuels derived from coal (which are included in gross coal cosumption)and petroleum products not used as fuels (chemical feedstock, industrial and white spirits,lubricants,bitumen and wax)are excluded.
3-Imported and indigenous natural gas including colliery methane piped to the surface and consumed at collieries or disposed of.
4-To avoid double counting,fuels used in the production of other fuels are excluded,only the coal equivalent of the secondary fuel finally consumed being shown.
5-Liquid fuels derived from coal and methane used at collieries.

References: Table 156 ,Annual Abstract of Statistics,1965 . Original source,Ministry of Power,U.K.

available for industry usage. Moreover it was still possible in some cases to use coal instead of oil and thus the harmful effect of a reduction in crude imports w as minimized.(6)

The striking fact in the post-war energy development was the tendency towards less direct usage of coal and solid fuel in the industry. Direct consumption of coal fell by 8% between 1948 and 1957. Yet, during the same period the electricity and gas industries which mainly depended on coal fuel increased their shares in total British energy consumption, and this helped to hold net coal consumption from falling. On the other hand oil consumption increased by 92% between 1948 and 1957. Estimates presented by experts in 1955 forecasted that oil consumption would further increase by 140% by 1970 (i.e., from 25 m. tons to 61 m. tons) and by 50% between 1970 and 1985. Coal consumption was expected to double between 1955 and 1970 (owing to the increased amounts of investment in that field) but to recede after that leaving a gap to be increasingly

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(6) For the effect of the Suez crisis on industrial production in Britain see 1956 Economic Survey of Europe, U.N.; Ministry of Power, Survey of Fuel Oil used by Industry, 1957, London; and O.E.E.C., Europe's Need for Oil, Chapter 6.

filled by oil and atomic power.(7) After the Suez crisis the situation became different. The Ministry of Power's forecast was that by 1965 fuel consumption in Britain would rise by 50 m. tons of coal equivalent above the level of 1955 (i.e., from 250 m. to 300 m. tons of coal equivalent). Of this the Ministry estimated that British coal industry would provide 10 m. tons and atomic energy the equivalent of another 14 m. tons of coal, thus leaving 26 m. tons of coal equivalent to be covered by oil. At the official rate of coal to oil conversion the increase in oil requirements by 1965 was thus estimated at 15 m. tons above 1955 level, a growth of 60%. Clearly that was considerably slower growth than the post-war development and that had been envisaged by oil experts before the Suez crisis.

However, during the years following 1957 there was no sign that the intentions to change the pattern of energy requirements of Britain were likely to be realised in practice. The nuclear programme which was conceived in 1955, and which the government particularly contrived to support after the Suez events aimed at providing the Electricity Boards with at least 5 million KW of nuclear capacity by 1965 was modified

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(7) See discussion and references given on this matter in Chapter 7 in this research.

in 1961 and the period for attaining this target had been extended to 1968.[8] Contrary to earlier anticipation it was found that the technical system chosen for the nuclear stations then under construction produced electricity at a cost substantially higher than obtaining from modern oil - or coal - fired plants. In fact it was not until 1965 when some new system of nuclear stations had been designed to produce electricity at about 10% or more below the cost of coal fired plants.[9] To give some figures on this point; this latter technique in the design of nuclear stations was expected to generate electricity at a total cost of 0.38 - 0.46 pence per kilowatt/hour. This compared with costs of 0.52 - 0.54 pence per kilowatt/hour for the advanced coal fired stations and of 0.52 pence for the advanced oil fired stations. But it should be emphasised here that oil fired stations were burdened by the fuel oil tax - about £2.2 per ton. Without this tax oil fired stations could produce electricity at 0.41 pence per K.w.h.[10]

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(8) U.K. Atomic Energy Authority's Annual Report 1960-61.

(9) See Pet. Press Service, July 1965, p.250 - Also White Paper "Fuel Policy" Comnd. 2798 H.M.S.O.,1965.

(10) Figures from Pet. Press Service, Nov.,1965, p.412.

In the years following 1957 the actual contribution of the coal industry to Britain's energy requirement was also considerably less than was intended. To review the situation we may draw the line back to 1950 when the National Coal Board (N.C.B.) published its proposals for the reconstruction and development of the mining industry.(11) The programme outlined by the N.C.B. was designed to cover the period 1950 to 1965, and aimed at an annual production which would rise to 240 m. tons from 1961 to 1965. That was an increase of 37 m. tons over the 1949 figure. The capital cost for this plan was estimated to be £635 m., 1949 prices. In 1955 the N.C.B. reconsidered its programme and in the light of its actual achievements decided that that would take longer to carry out and cost considerably more than had previously been assumed. Thus the N.C.B. decided to embark upon a new plan which aimed at raising the ultimate output of coal to 250 m. tons by 1970, and the estimated cost was figured at £1,350 m. The latter plan envisaged a reduction in the labour force in the industry from 720,000 men in 1949 to 672,000 men in 1965, but

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(11) "Plan for Coal", N.C.B., 1950.

meanwhile coal output per man was to be raised from 280 tons to 342 tons per annum between the two respective dates.[12] However in 1959 the N.C.B. had to modify its plan once more because of the difficulties encountered in disposing of coal output owing to the strong competition of oil fuel. This situation was not unique to the British coal industry but also applied to other European producers. Thus in spite of the fall in British coal production from 226.5 m., tons in 1952 (a post-war peak which was equal to 1938's production) to 223.6 m. tons in 1957 and further down to 206.1 m. tons in 1959 large stocks were excessively accumulated. The N.C.B. decided that it was no longer necessary to plan for a continuous increase in the demand for coal. Under the title the "Revised Plan for Coal" issued in 1959 the N.C.B. had modified its target to only 200 - 215 m. tons in 1965. Capital expenditure for the decade 1956-65 was planned to be £175 m. less than had been drawn out in 1956 programme yet a rise in productivity to 375 tons per man year was anticipated by 1965.[13] During 1959 and 1961 coal

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(12) "Investing in Coal", N.C.B. - 1956.
(13) W.A. Robson, "Nationalized Industry and Public Ownership", p.395.

production was reduced further by 15.641 m. tons. In the Parliament it was demanded that the government should assist the coal industry by limiting oil imports and also that a public enquiry should be held into costing and pricing policy in the oil industry. The government refused these requests but in April Budget, 1961, and for the same purpose, namely protection of the national coal industry, a tax of 2d. per imperial gallon, £2.2 per ton, was imposed upon Kerosine, gas/diesel oils (excluding automatine gas oil) and fuel oil. This tax, the 2/6d tax already levied on gasoline and many other indirect taxes were again raised by 10% in July of the same year. The government never really made it clear that these duties were intended for coal protection, yet this had generally been understood. Now with oil duties substantially raised and with a more energetic attitude in re-organization the coal industry (14) and in establishing more efficient market contacts, inland coal sales were expanded and it was possible then to expand coal output again. However this did not last for long and in 1965 output was again lowered and in 1966 it was further reduced by 12.9 m. tons and stood at 174.6 m. tons.

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(14) Lord Robens was appointed Chairman to the N.C.B. in 1961.

It was the oil industry that was most competitive and was able to expand its share in the British market throughout the period in spite of government grants and protection given to coal and atomic programmes.

Between 1957 and 1964 oil consumption in Britain more than doubled and its share in total consumed fuel increased from 14.3% to 32.4%. The growth in fuel consumption in the transport sector was almost entirely made by oil. Although coal continued to be the main fuel used by electricity industry consumption of oil in power stations increased to 5 - 6 m. tons per annum in 1965. In the Iron and Steel industry consumption of coal was larger than oil until 1959 but by 1963 consumption of oil was 6.3 m. tons of coal equivalent against only 2.4 m. tons of coal. After the oil duty of 2d. a gallon (£2.2 per ton) was imposed in April in 1961, increased by 10% in July of the same year, the Iron and Steel Federation protested to the government that this had added more than £7½ m. a year to the steel industry's costs. Thus the attempt to reduce oil consumption, viz., oil imports, was detrimental to the competitive position of the Iron and Steel industry in world markets.

Oil replaced coal partly because of technical progress in machine designs, which increasingly favoured the usage of liquid fuels, and partly because of its availability at lower prices. To give an example for coal/oil price relation; in 1960 f.o.b. crude prices of the Middle East were reduced by about 12 - 14% U.S. crude (f.o.b.) was reduced in the same year by 4 - 5%. Ocean transport costs were also declining and on the average U.K. c.i.f. oil prices fell by about 6.5% below 1959. On the other hand inland coal prices were raised in September 1960 by 7/- a ton. The following figures may also give a clear picture for the fall in oil import prices during the years 1958-1964.(15)

Petroleum Import Prices - 1961 = 100

1958	1959	1960	1961	1962	1963	1964
120	111	104	100	98	97	95

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(15) The source of these figures is the board of Trade's "Import and export unit value index numbers". The index does not specify "petroleum", it only gives "fuel" import prices. Yet fuel imports included only a small proportion of coal and coke in 1957 and 1958. In the following years imports of fuel other than oil were negligible.

U.K. Fuel Imports £ mil.):

	1956	1957	1958	1959	1960	1961	1962	1963	1964
Oil	370.4	440.2	431.8	465.7	479.8	481.3	531.8	556.5	583.1
All Others	43.3	25.5	7.1	1.4	0.5	0.8	0.7	0.6	0.5

Source: Annual Abstract of Statistics 1965.

This fall in import prices, besides the fierce competition between marketing companies, which led to cuts in prices - excluding taxes, and the fall in inland cost of transportation enabled oil to increase its share in the British market considerably in spite of the rising level of taxation.(15)

It must be mentioned in this context that coal prices were rising throughout the period as follows:

Index Number of British coal wholesale prices

Annual Averages 1954 = 100

1958	1959	1960	1961	1962	1963	1964
137.6	135.4	137.4	144.9	151.8	153.7	154.3

(Source: Annual Abstract of Statistics 1965)

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(15) Lower Inland costs of transporting oil were achieved by the use of larger and better designed road tankers and the rationalisation of transport schedules for the dispatch of the product. See Pet. Press Service, June 1965, p.214. For the increased competition between marketing companies and effect on inland prices see Pet. Press, Feb. 1967, p.42-43, April 1967, p.122-123 and 127-129. On the other hand, taxation on motor fuels was raised further by 10% in July 1966. The price thus jumped to 3/7d. per gallon - London prices, excluding tax, for ordinary grade gasolines were up to 1/5½d per gallon in early 1967.

Sources of Oil Supply to Britain.

During the decade 1957-1966 Middle East production was expanded more than any other producing area in the world, from 176.2 m. tons to 463.6 m. tons. With the exception of the new fields in the North African deserts the rate of growth of Middle East production was also the highest. The Middle East remained also the largest exporting area expanding its sales to various parts of the world from 157 m. tons in 1957 to 429 m. tons in 1966. In this respect it was followed by the Caribbean from 130 m. tons to 165 m. tons between the two respective dates. North African production increased from 2.4 m. tons in 1957 to 113.2 m. tons in 1966 and exports from nil to 108 m. tons during the same period. The discoveries of the African fields came after the search for new oil deposits was intensified following the Suez crisis.(17)

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(17) See "Five Years' Finds and Failures", Pet. Press Service, Nov. 1961. The most successful discoveries during the last decade were in Libya, Algeria and Nigeria. Libyan production was developing at a tremendous rate. Began late in 1961 with 0.9 m. tons it reached 41.4 m. tons in 1964 and 72.3 m. tons in 1966. Algerian production was stepped up from 0.4 m. tons in 1957 to 33.8 m. tons in 1966. Nigerian production was also increased from 0.3 m. tons in 1959 to 6.0 m. tons in 1964 and then to 20.7 m. tons in 1964. Figures obtained from "Statistical Review of the World Oil Industry - 1966", Published by B.P. Co., 1967.

Throughout the decade under review the Middle East remained the most important source of oil supply to Western European countries. In 1966 their imports (including Britain's) from that source totalled 217.5 m. tons, compared with 92 m. tons in 1955. However, as imports from Africa, which developed dramatically after 1959, totalled 122.5 m. tons in 1966 the relative importance of the Middle East decreased. Of Western European oil imports in 1966, 51.5% came from Middle East sources, compared with 68% in 1955. As regards Britain, Table (57) gives a comparison between the relative situation of Middle East oil in 1955 and in 1966. It can be seen that the share of Middle East in total imports of oil in Britain decreased by 22% between 1955 and 1966. This would be compared with 16.5% reduction in the share of Middle East in total Western European (Britain included) oil imports. Hence Britain, on the average, was more successful in reducing the dependence on the Middle East oil during the ten years which followed the first Suez closure. In 1966 she was less dependent than most of her European partners on Middle East oil, i.e., 47.7% compared with W. Europe's general average of 51.5%, whereas before 1956-57 crisis Britain relied on this source more than most of them did. However it should be

TABLE (57)

U.K. Imports of Petroleum and Petroleum Products

	1955 Mil. Tons	%	1966 Mil. Tons	%
Middle East.				
Kuwait	16.324	45.8	16.175	17.6
Iraq.	3.907	11.0	10.402	11.3
Iran	1.336	3.8	4.637	5.1
Saudi Arabia	.376	1.1	6.565	7.1
Bahrain, Qatar, Aden Oman and Others	2.889	8.1	6.135	6.7
Total Middle East	24.832	69.8	43.914	47.7
Other Sources:				
Africa: Nigeria			7.060	7.6
Libya			10.030	10.9
Algeria			1.737	1.9
Total Africa	0.0	0.0	18.837	20.4
North and South America, Europe and Others	10.812	30.2	29.260	31.8
Total Imports of Crude and Refined Petroleum in U.K.	35.644	100	92.001	100

Source: Annual Statement of the Trade of the U.K. 1957, and Overseas Trade Accounts of the U.K. 1966.

emphasised that the share of the Middle East in British oil imports was rising in the years 1957-1960 and it was only the discoveries of rich oil fields in North Africa which changed that situation.

British imports of crude oil from the Middle East were increased from 30.9 m. tons in 1959 to 36.9 m. tons in 1965 whereas total crude imports were advanced from 39.2 m. tons to 66.1 m. tons between the two respective dates. Thus, the Middle East share in total crude imports fell from 79% in 1959 to 56% in 1965. Meanwhile imports of crude from Libya and Nigeria increased from 1% to 27% of total crude imports into Britain between 1959 and 1965. As regards refined products the share of the Middle East also fell from 14% in 1959 to 12% in 1965.(18) Table (58) gives more details of the development of oil imports into Britain by area of origin between 1959 and 1965. Thus although dependence on oil in Britain increased considerably during the decade 1957-66 relative reliance on the Middle East sources was substantially reduced. Consequently, the relative

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(18) Meantime Europe increased its share in total British imports of refined petroleum from 27% in 1959 to 56% in 1965. Yet this increase in European share was principally accomplished at the loss of North and South America.

OIL IMPORTS INTO THE UNITED KINGDOM BY AREA OF ORIGIN

A—Imports of Crude and Process Oils

Area	1959		1960		1961		1962		1963		1964		1965	
	Tons (000)	% of Total	Tons (000)	% of Total	Tons (000)	% of Total	Tons (000)	% of Total	Tons (000)	% of Total	Tons (000)	% of Total	Tons (000)	% of Total
Kuwait	16,336	42	21,865	49	23,718	49	23,236	44	21,684	40	18,044	30	14,386	22
Iraq	6,528	17	6,987	16	5,980	12	7,144	14	8,465	16	11,244	19	10,346	16
Saudi Arabia	613	1	1,167	3	1,805	4	2,748	5	1,950	4	1,795	3	4,384	7
Iran	5,744	15	5,209	12	5,250	11	3,207	6	3,071	6	3,676	6	4,143	6
Abu Dhabi ...	—	—	—	—	—	—	—	—	1,114	2	2,381	4	2,827	4
Rest of Middle East	1,698	4	763	2	911	1	1,177	3	918	1	968	2	800	1
Total Middle East	30,919	79	35,991	81	37,664	77	37,512	72	37,202	69	38,108	64	36,886	56
Libya	—	—	—	—	342	1	2,682	5	5,809	11	8,880	15	11,327	17
South America ...	6,611	17	6,331	14	6,590	13	7,850	15	6,150	11	6,693	11	8,613	13
Nigeria	384	1	774	2	2,030	4	1,846	4	2,366	4	3,351	6	6,826	10
Other Areas	1,324	3	1,519	3	2,332	5	2,459	4	2,975	5	2,364	4	2,452	4
Grand Total ...	39,238	100	44,615	100	48,958	100	52,349	100	54,502	100	59,396	100	66,104	100

B—Imports of Refined Products.

Area	1959		1960		1961		1962		1963		1964		1965	
	Tons (000)	% of Total	Tons (000)	% of Total	Tons (000)	% of Total	Tons (000)	% of Total	Tons (000)	% of Total	Tons (000)	% of Total	Tons (000)	% of Total
Europe	3,414	27	4,402	32	3,960	34	5,828	39	6,443	37	7,648	41	11,277	56
North and South America ...	7,180	57	6,721	49	5,549	47	5,977	40	7,136	41	7,221	39	6,167	30
Middle East	1,824	14	2,539	18	2,172	18	2,993	20	3,746	21	3,420	18	2,371	12
Rest of World ...	270	2	71	1	65	1	51	1	90	1	326	2	481	2
Total	12,688	100	13,733	100	11,746	100	14,849	100	17,415	100	18,615	100	20,296	100

(Ministry of Power : Statistical Digest)

importance of the Suez Canal and other Middle East oil transit facilities was also equally reduced. It remains for us now to investigate various transport factors which affected the share of the Suez Canal in British oil imports from the Middle East.

Dependence on the Suez Canal.

Attempts to reduce the dependence of the Middle East oil traffic on the Suez Canal were not only desirable to the European consumers but also to Western oil companies in the Middle East. The other alternatives to the Canal, if we may recall, were: (a) pumping oil in pipelines directly to the Mediterranean coast; and (b) shipping oil via the Cape route.

Failure of Pipeline Projects.

In our review for the period which preceded the Suez crisis we came to conclude that attempts to replace the Canal by pipelines were by no means as successful as the oil companies had planned. However during the Suez crisis Middle East pipelines were given fresh and serious consideration(19). Yet at the same time the demolition of the IPC pipeline pumping stations

(19) Seventeen oil companies with Middle East interests conferred in London in May 1957 to consider and discuss plans for building additional pipelines to the Eastern Mediterranean coast in order to reduce dependence on the Suez Canal. See the Economist, May 25, 1957, p.674, and Pet. Press Service , June 1957, p.228.

in Syria promoted the exploration of alternative routes to the Mediterranean Coast. Among the new projects was a scheme to build a large diameter pipeline (30/32 inch) from the Gulf of Aqaba to the Mediterranean Coast through Israel.(20) France in particular took an active interest in this project as an oil supply route to Europe alternative or supplementary to Egypt's Suez Canal. However the project was unrealistic and therefore failed. About £20 - £25 m. investments were necessary to build such a line and it was clear that Arab countries would not allow their oil to be carried through Israel.- Kirkuk - Haifa line was abandoned in 1948 and there was no guarantee that a similar action would not be repeated. Most bold, however, was that plan to build a gigantic pipeline of 38/40 inches diameter gathering oil from Kuwait, Persia and other Persian Gulf territories which were dependent on the Suez Canal route, and transporting it through Iraq to a Turkish port on the Mediterranean. This was the biggest crude oil pipeline system ever seriously considered. It was destined to carry

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(20) This scheme should not be confused with the line which was completed later between Eilath and Haifa (16 inch with a through-put capacity of 2.9 m. t/year) to serve Israel inland requirements.

ultimately 70 m. tons a year; it required 10 to 12 pumping stations, about ½ million tons of steel and its cost was estimated at about £300 m. or more. Construction period of that project was estimated at about 4 - 5 years.(21) Nevertheless, this project did not materialize owing to the refusal of Iraq to grant transit rights and also because of political difficulties involved in reaching agreement with all governments concerned. Another project for a pipeline from Central Iran to the Mediterranean Coast through Turkey was also abandoned. Proved oil reserves in that area were insufficient to justify the required capital expenditure for the project. Thus a major expansion in Middle East pipelines was, as ever, hindered by political difficulties. If the projected Persian Gulf/Turkish Mediterranean Coast had been carried out successfully dependence on the Suez Canal would have been substantially minimized. (Also, see Diagram (60) for feasible reductions in the unit cost of transporting oil as a result of increasing pipeline size).

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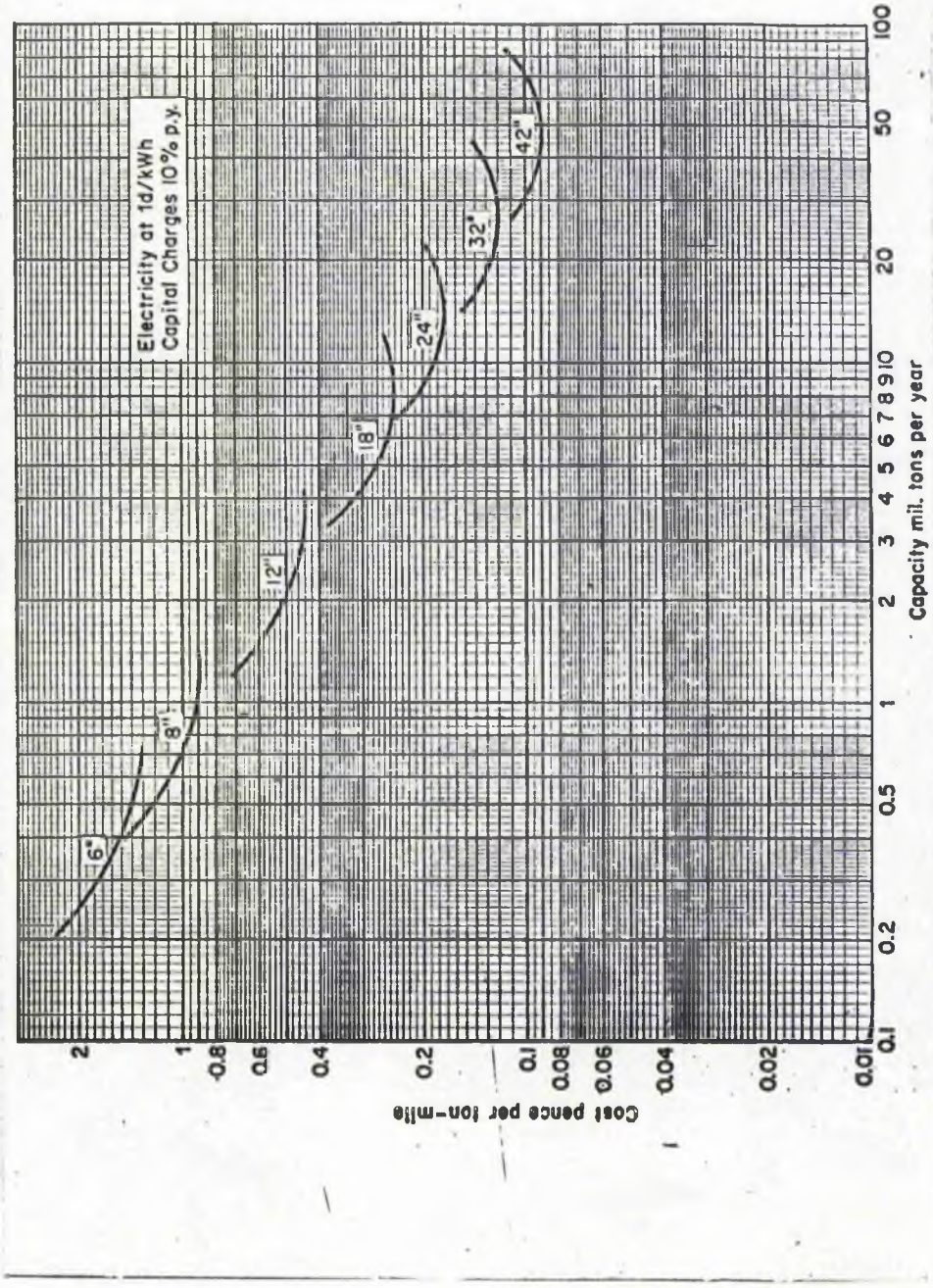
(21) Figures obtained from Pet. Press Service, June 1957, p.229.

DIAGRAM (60)

(Source: M.Hubbard,Econ.of Transporting Oil,p.55.)

Feasible Reductions in the Unit Cost of Transporting Oil as a result of Increasing Pipeline Size.



In fact the development of Middle East pipeline system was only limited to the improvements accomplished in the lines which had already been into operation before the Suez crisis. The capacity of the IPC pipelines was expanded from 26 m. tons/year to about 40 m. tons/year by technical improvements and by the completion of another parallel line from Kirkuk to Tripoli in August 1961. The capacity of the Tapline was increased from 16 m. tons/year to 22 m. tons/year by the end of 1958 and to about 23 m. tons/year by 1966. (potential capacity of the line 25 m. tons/year).

Nearly fully utilized the IPC pipelines channelled over 70% of Iraqi production in 1963. The rest of Iraqi exports about 12 m. tons, or 20% of production, was produced in the southern fields and was shipped from Fao. The importance of the southern fields was increasing because of the continuous troubles which the IPC faced in operating the northern pipelines via Syria. The latest of these troubles occurred when Syria shut down completely the IPC pipelines between mid December 1966 and the first week of March 1967. In September 1966 the Syrian government had asked the company to raise transit dues to 5/-10d. per ton of crude, instead of 4/- a ton, and loading

fees at Banias to 2/- instead of 1/1d. a ton. Besides, the government demanded that these increases should be applied with effect from January 1st 1966 and thus adding £3.75 m. to its revenues over £7.5mwhich had actually been received for the first 9 months of 1966. The IPC company refused these demands and negotiations between the two parties were broken off in November. The dispute was finally settled when the IPC agreed on Syrian demands and thus total transit and port dues were raised by 50%, i.e., from 5/1d. to 7/10d per ton. Later, when discussing the economics of transporting oil by sea from the Persian Gulf we shall realize that tankers offered not only safer but also more economical means of transporting Middle East oil to Europe. In addition the rate fixed by tankers to cover the Suez Canal dues, 6/3d. per ton (this is a fixed sum per ton of oil of which roughly two thirds were incurred on the loaded passage and one third on the ballast passage) was in 1967 lower by 1/7d. per ton than pipeline transit dues.

Similarly, Tapline faced difficulties concerning transit dues with the host governments. Yet Tapline Company was in a stronger bargaining situation than the IPC since Saudi Arabian oil would be easily re-routed via Persian ports if pipeline transit dues increased above the limit. The increase in the

amounts of oil carried by the Tapline was in fact much smaller than the increase in direct shipments from the Persian Gulf.(22) In 1966 about 70 m. tons of S. Arabian oil were exported to West of Suez of which only 23 m. tons were carried via Tapline to Mediterranean coast.

Whether in the case of Saudi Arabia or Iraq the importance of the pipeline system was relatively declining since its capacity was not expanded at the same rate as oil exports to the West. The capacity of Tapline was advanced by 45% during the period whilst production (almost totally for exports) was rising by about 9.5% per annum. Similarly, IPC pipeline was increased by 54% whereas production increased annually at an average of 8%. In 1966 more than 50 m. tons of oil were exported from Iraq to West of Suez and of them about the fifth was shipped from the Persian Gulf. In 1955 with smaller capacity the IPC carried nearly all Iraq's oil exports to the West. To conclude, during the

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(22) During the period 1957-1967 some remarkable improvements were achieved in shipping facilities at Ras Tanura. Also new deep water loading points, in the Sea Islands (Persian Gulf) were brought into services in 1967. One of these new loading points is able to take tankers up to 300,000 d.wt.

decade following the Suez closure 1956-57 Middle East pipelines to the Mediterranean could not substitute the Suez Canal. However this was not due to technical factors or to lack of financial resources, but to political difficulties in reaching agreements for building new lines. It seems also that the troubles faced in fixing pipeline transit dues at profitable levels to the companies had significantly affected the development of the existing lines. Consequently a larger proportion of Iraqi and S. Arabian oil exports to the West was bound to go via the Suez Canal or the Cape route.

Competition Between the Suez Canal and the Cape Route Over Large Oil Tankers.

The technical and economic advantages of large tankers were well known to the oil world for many years before the Suez crisis yet their number was rising slowly. In 1956 the world tanker fleet contained 400,000 tons d.w. of tankers in sizes of 45,000 t.d.w. and over, compared with 36.0 m. t.d.w. of small tankers under the size of 25,000 t d.w. The rest of the world tanker fleet in that year was 8 m. t.d.w. of "medium sizes" of 25-45,000 t.d.w. Several wider economic considerations, other than the mere saving in unit cost of transport when using a larger carrying capacity, prevented any quick expansion in

the employment of larger tankers in Middle East/Europe oil trade. Of these factors the most important were (a) the insufficient number of ports, terminals and docks which could accommodate large tankers; (b) flexibility which was needed in oil delivery owing to the size of most of European refineries and to their limited storage capacity. To bring in large quantities of oil to these refineries meant higher capital expenditure in stockpiling and unnecessarily locking up of funds for long periods of time; (c) the Suez Canal which only permitted a gradual increase in the dimensions of vessels passing through it. The Canal improvment projects were always planned according to the needs of commerce rather than the latest technique in shipbuilding and thus always protected the "average" sizes of ocean going commercial vessels.

The political and economic crisis of Suez in 1956-57 changed these factors. The closure of the Canal showed that smaller sizes of tankers or even the medium sizes were obviously at major disadvantages when using the Cape route.(23) Besides, since Western

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(23) See discussion on this point in Chapter 8.

European consumers and oil companies of the Middle East were not sure that Egypt would sufficiently carry its obligations towards improvement projects in the Canal or towards free navigation they were determined to play safe and employ larger tankers in future. To accomplish this, economically it was intended to increase the number of terminals, ports and repair docks suitable for large tankships. Besides, the oil crisis of 1956-57 emphasised to the Europeans the importance of keeping larger stocks (although this would be achieved at high capital expenditures) and building more as well as larger refineries at home. Hence bigger single deliveries and lower unit cost of transporting crude oil were matters which received the main consideration in the post-Suez period and favoured the employment of larger tankers. (24)

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(24) Among the factors which accelerated the building of larger tankers was the problem of crewing for smaller tankers. "The problems of crewing have, in times of full employment, become much more acute and it is no exaggeration to say that if the industry still had to rely on tankers of the 12,000 d.w.t. size it would be impossible to find the necessary crews." M. Hubbard, The Economics of Transporting Oil to and Within Europe", p.5 - London 1967.

In Diagram (61) various sizes of tankers between 16,000 d. wt. (T-2) and 85,000 d. wt. are considered for comparison to show the effect of increasing size on unit operating costs. It can be seen that taxes, depreciation charges and running expenses decrease per unit when employing larger carrying units. A tanker of 85,000 d. wt. could therefore "operate and provide a return for investment at charter rates of one-half those necessary for a T-2 tanker to yield an equal return".(25) Diagrams (62) and (63) are derived from one of the most recent studies on the economics of transporting oil and thus clearly illustrate the comparative advantages of larger size tankers. Diagram (63) shows that a tanker of 150,000 d. wt. could operate at INTASCALE - 68%(26) whereas a tanker of 10,000 d. wt. would not be able to operate under Intascale + 38%. Between these two extremes it is shown in this diagram that with every increase in size of tankers a lower charter rate, relative to Intascale, can be accepted. Between 1956 and 1966 the growth in the size of tanker was tremendous and Table (59) illustrates this fact clearly.

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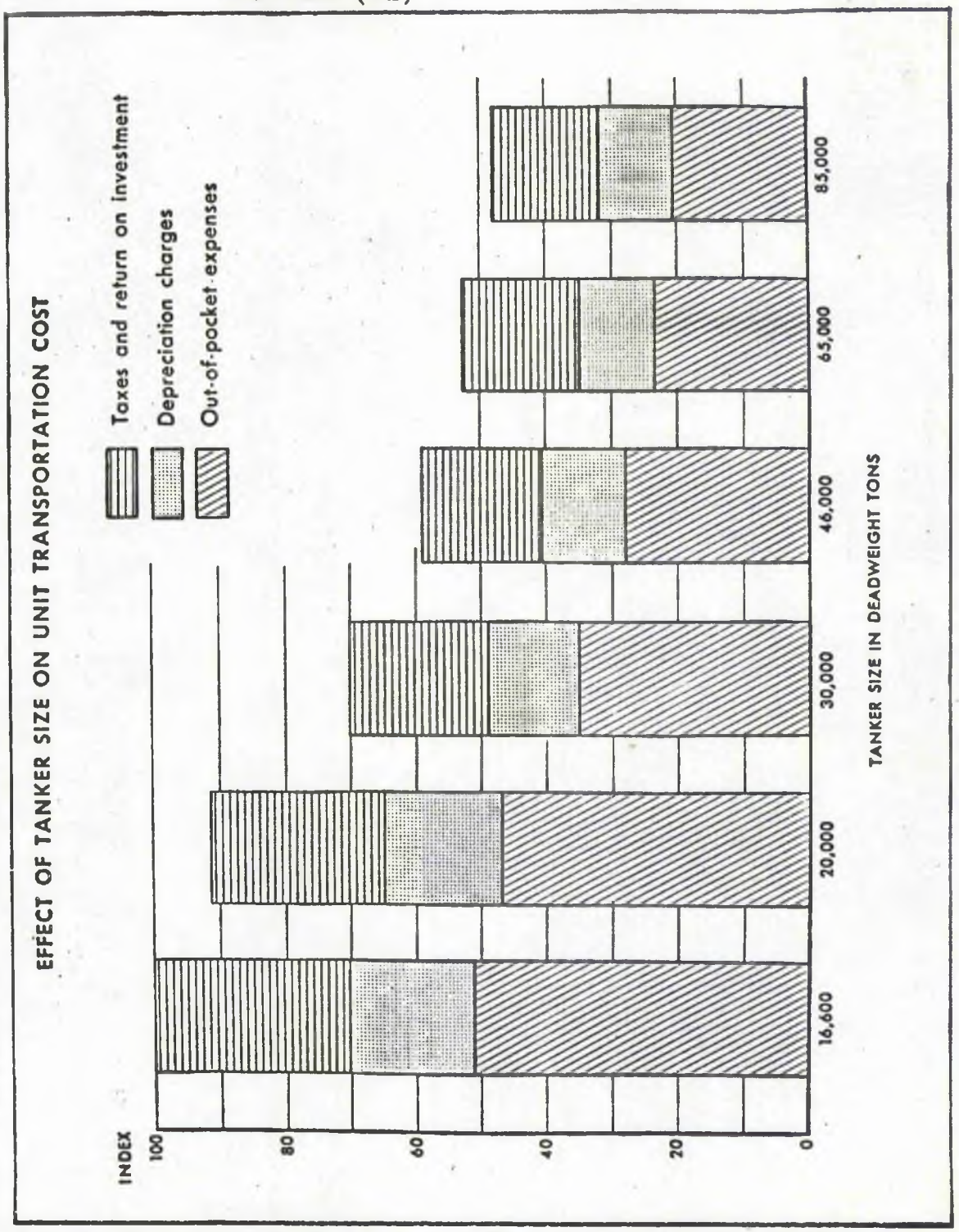
(25) P.P. Nibley and D.W. Dreir, Pipeline Economics and Technology, p.5. Published by TAPLINE Co., Beirut, Lebanon, 1960.

DIAGRAM (61)

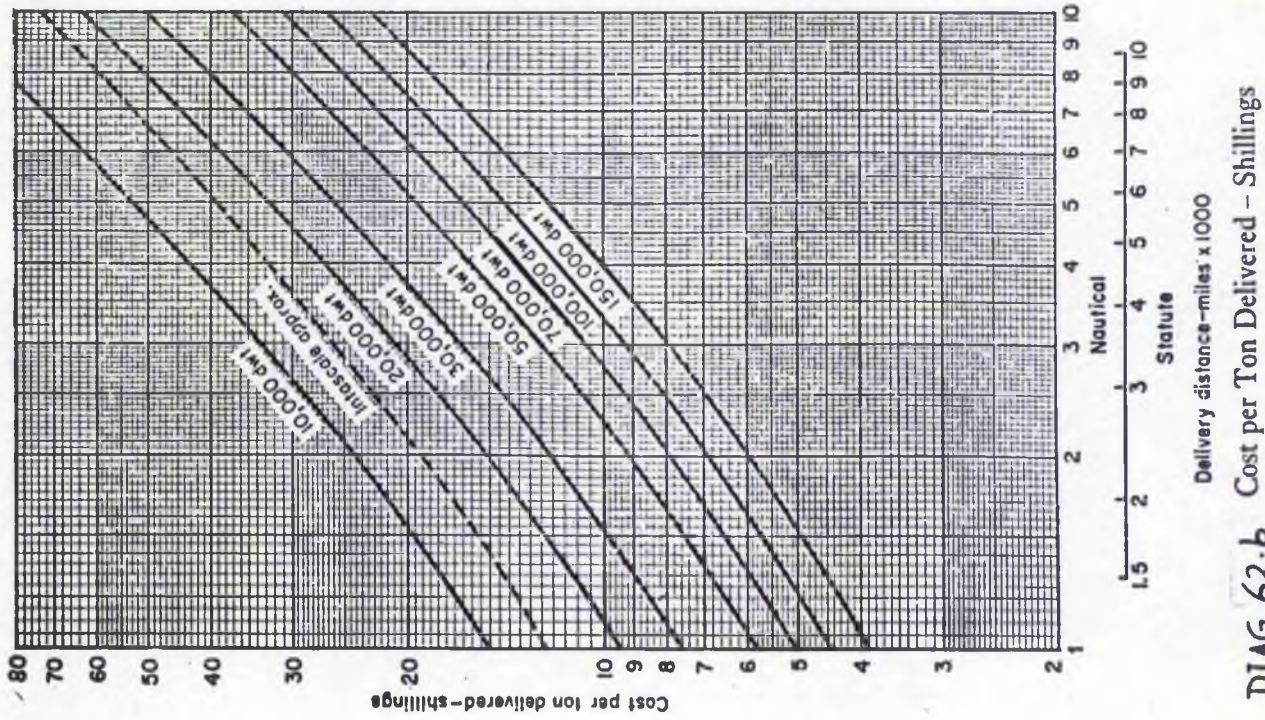


Source: Pipeline Economics and Technology in the Middle East", by P.P.Nibley and D.W.Dreier, Trans-Arabian Pipeline Co., Beirut, Lebanon, 1960.

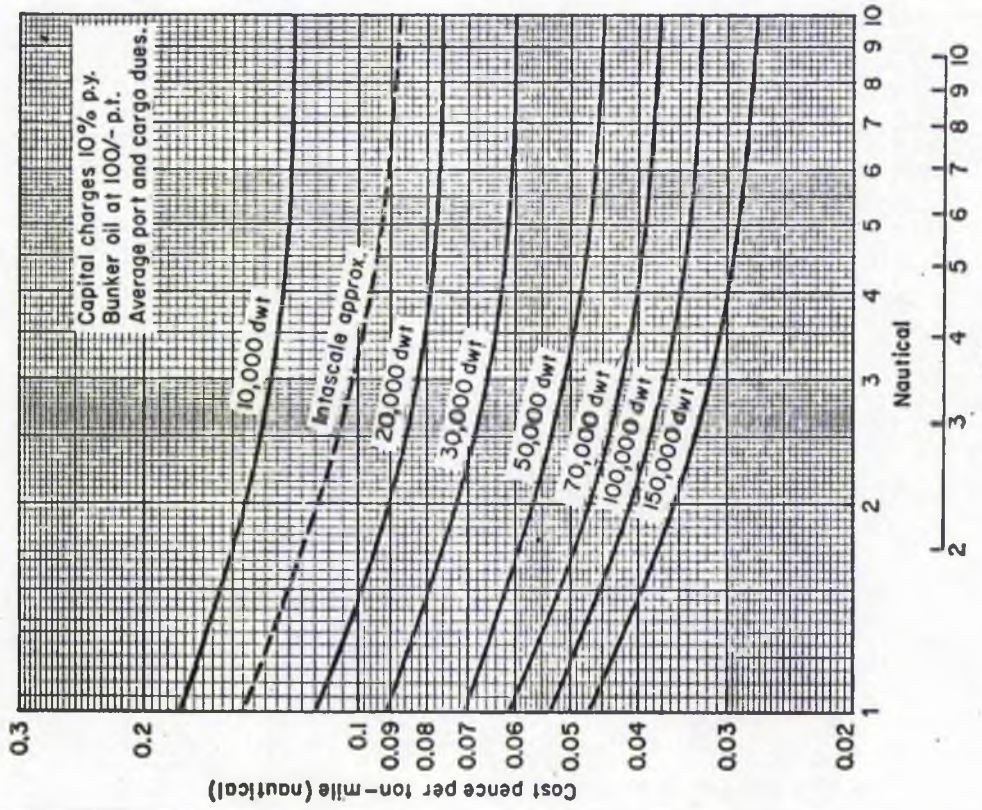
DIAGRAM (62)

(Source:M.Hubbard,Econ. of Transporting Oil.p.48-49.)

EFFECT OF TANKER SIZE ON TRANSPORTATION COST.



DIAG 62.b Cost per Ton Delivered – Shillings

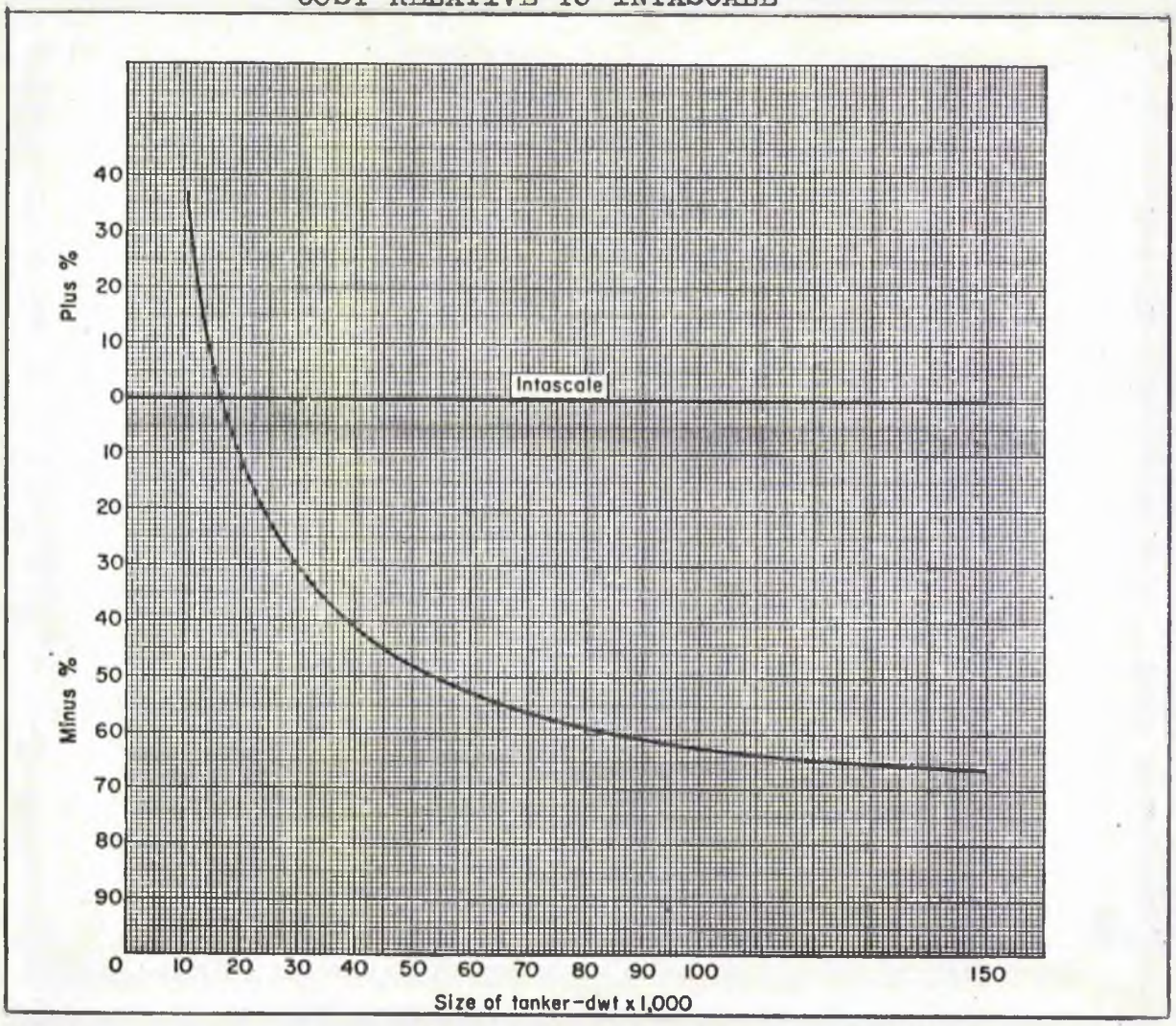


DIAG. 62.a Total Cost – Pence per Ton-mile

DIAGRAM (63)

EFFECT OF TANKER SIZE ON UNIT TRANSPORTATION COST

COST RELATIVE TO INTASCALE



Source: M.Hubbard,Econ. of Transporting Oil,P.50

(26) Since the early 1960s AFRA has been expressed as a percentage above or below 'INTASCALE', International Tanker Nominal Freight Scale. "INTASCALE developed from the M.O.T. and U.S.M.C. scales established during the war, is a tabulation of comparative freight costs between a very large number of oil ports throughout the world. Intascale does not purport to represent the actual cost but only the comparative costs so that if, for instance, a tanker is chartered for different voyages at Intascale minus x% it should be earning about the same profit or loss per day whatever the voyage. If the Intascale rates for a large number of voyages are plotted against distance it will be found that, apart from those where there some abnormal costs, such as particularly heavy dredging dues or passage through a canal, all the points fall virtually on a straight line. This line corresponds very closely to the formula 6/- plus 0.08d. per Ton-mile. In other words Intascale corresponds to a terminal cost, including the ships cost during the assumed number of lay-days, of 6/- p.t. and the cost when actually making the passage of 0.08d. per Ton-mile",
M. Hubbard, "The Economics of Transporting Oil to and within Europe", p.9

TABLE (59)

WORLD TANKER FLEET BY SIZE. Million Tons D.W.

	1938	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966.
Under 25,000 dwt.	16.6	36.0	37.5	38.7	38.3	36.8	35.6	34.0	32.7	31.3	31.2	30.0
25 - 45,000 dwt	-	8.0	11.2	15.2	18.8	21.6	23.3	24.7	25.4	25.4	25.5	25.3
45 - 65,000 dwt.	-	0.3	0.6	1.2	2.8	4.3	6.0	8.4	12.0	16.1	19.3	21.2
65 - 85,000 dwt.	-	-	-	-	0.3	0.5	1.3	2.8	2.6	4.8	8.1	12.7
85 - 105,000 dwt.	-	0.1	0.3	0.6	0.7	0.7	0.7	1.0	1.8	3.5	5.0	6.6
105 - 125,000 dwt.	-	-	-	-	-	0.1	0.2	0.3	0.4	0.4	0.9	2.5
125,000 dwt. & over	-	-	-	-	-	-	-	0.1	0.1	0.1	0.1	1.1
TOTAL	16.6	44.4	49.6	55.7	60.9	64.0	67.1	70.3	75.0	81.6	90.1	99.4

Source: Statistical Review of the World Oil Industry in 1966 - Published by B.P. Co.Ltd., 1967.

Tankers of sizes of 85,000 d.wt. and over increased from 0.1 m. d.wt. in 1956 to 10.2 m. d.wt. in 1966, thus constituting 10.3% of world tanker fleet in the latter date compared with about 0.2% in 1956. Tankers of sizes of 45 - 85,000 d. wt. increased from about 0.7% of up to 34% of world tanker fleet between 1956 and 1966. According to London Tankers Brokers Panel (which established AFRA) tankers above 45,000 d. wt. were regarded as "large tankers" (since 1964). Adopting this classification,for practical reasons, we can see that the percentage of large tankers in world tanker fleet increased from less than one per cent (i.e., 0.9%) in 1956 to 44.2% in 1966. Medium size tankers, i.e., between 25,000 and 45,000 d. wt. as defined by L.T.B.P.,constituted 25.5% in world tanker fleet in 1966 against 18% in 1956. Small size tankers, i.e., of 25,000 d. wt. and under represented 30.3% of world tanker fleet in 1966 compared with 81.1% in 1956.

Improvement Projects in the Suez Canal.

In 1956-57 doubts were expressed by Western world shipping concerns and oil companies that Egypt would efficiently control the Suez Canal affairs and implement essential improvement projects. What happened during the decade following the Suez nationalization was quite contrary to previous expectations. Before nationalization the Suez Canal company had commissioned an American firm to make a study of the traffic which would want to use the Canal until about 1972. The firm reported back by early 1957 that oil traffic in the Canal would rise from 69 m. tons, 1955' traffic, to 254 m. tons in 1968 and to about 335 m. tons in 1972. The average tonnage of tankers using the Canal was expected to rise from an "average" of 18,900 d. wt. in 1955, to 27,800 d. wt. in 1968 and to 32,100 d. wt. by 1972. The Canal company's own prepared programme (the 9th) for the same period was more ambitious than the plan which would be envisaged in the light of the study of the American firm.(27) The ninth programme planned for increasing the capacity of the Canal so that it could accommodate

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(27) See reference given in Footnote (21) in this Chapter.

vessels up to 55-60,000 d. wt. fully loaded with a maximum draught of 40 feet by 1968. It also prepared for increasing the capacity of the Canal to allow for an oil traffic of 275 m. tons a year by 1968.

If we may recall, the Suez Canal's maximum draught before closure in 1956 was about 35 feet, and the eighth improvement project which was in progress aimed at raising this to 36 feet. When the Canal was re-opened in April 1957 only vessels of draught up to 34 feet were permitted to use the Canal, but soon (September 1st 1958) the pre-crisis conditions were regained. The new administration of the Suez Canal had combined the eighth and the ninth improvement programmes in one project, Nasser's project, and without any delay mobilized all its forces to accomplish it. By April 1961 the maximum permitted draught was increased to 37 feet. With a draught limitations of 35 feet 307 tankers of the world's 2,800 tankers in 1960 were unable to use the Canal. After the Canal's limit was raised to 37 feet (a tanker of about 50,000 d. wt. fully loaded) only 107 tankers of world fleet could not make the passage fully loaded. During the years 1961-1967 improvement in the Canal continued at a considerable rate, apparently not only to accomplish the original ninth project prepared by

the nationalized company and which was further modified, i.e. Nasser's project, but also to cope with the dramatic increase in the proportion of large tankers in world fleet. Thus since the end of February 1964 vessels with a maximum draught of 38 feet (about 55,000 d. wt. fully loaded) were able to use the Canal. Before the Canal was closed for the second time, June 1967, work was about to finish to allow tankers of 39 feet draught and it was also announced that vessels of 40 feet draught should be able to transit by December 1967 and those of draught of up to 48 feet by 1972. Besides, the Canal was greatly widened to keep pace with the progressive increase in the number of traffic of large tankers (and also other vessels). Other services to transiting vessels were also improved and new docks for shipbuilding and repairs were established. (28) Thus, in spite of the disruptions caused by the 1956-57 events the new Canal administration almost implemented all the nationalized company's improvement projects a year in advance and revised 1972's target of deepening the Canal to 48 feet maximum draught. Nevertheless, from our review of the growth in the size

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(28) Improvement projects are reported annually in full details in the "Suez Canal Report, Suez Canal Authority, U.A.R.

of the tanker we found that an increasing proportion of the world tanker fleet was becoming unable to navigate the Canal when fully loaded. It can be noticed from Table (60) that in 1966 tankers of sizes of 60,000 d. wt. and over (which could not in that year make their passage in the Canal when fully loaded) constituted 2,214,000 d. wt. of total British tanker fleet of 9,321,000 d. wt., i.e., 23.8%. The suitability of the Canal for navigation by large tankers was most essential but not, however, the only factor determining the choice of route. The advantages of the Suez route had to be weighed against the costs involved in using it. For tankers this matter may be stated simply as follows: savings in costs of shipping by using the Suez Canal route (instead of the longer Cape route) against the payments of Canal dues.

Canal Dues.

In 1956 the Suez Canal rates of dues were 34 Egyptian Piastres per S. ton in cargo and 15.5 Egyptian Piastres per S. ton in ballast. At average exchange rate of the period these rates were equal to 6/11.7d. per S. ton in cargo and 3/2.2d. per S. ton in ballast. During the period under review the Canal Authority faced difficult decisions in attempting to keep pace with the increasing size of tankers, increasing number of traffic and at the same time maintaining the rates of

TABLE (60)

TANKERS OWNED AND REGISTERED IN THE U.K.

30th June 1966, ACCORDING TO DEAD WEIGHT.

Deadweight Tonnage Range	No.	d.w.t. (000)
Under 25,000	182	2,838
25 - 29,999	21	579
30 - 34,999	28	901
35 - 39,999	23	834
40 - 44,999	15	631
45 - 49,999	14	680
50 - 59,999	12	644
60 - 69,999	17	1,099
70 - 79,999	2	143
80 - 89,999	6	494
90 - 109,999	5	478
Total	325	9,321

Source: U.K' Chamber of Shipping Annual Report 1966-67

dues at their old levels. The Managing Director of the Suez Canal once stated that it cost £10 m. to deepen the Canal by one foot only during its entire length.(29) In 1964 the Suez Canal dues were increased by imposing a general surcharge of one per cent over the existing rates of dues. Larger vessels were required to pay more, however. The Canal Authority demanded from vessels with a draught of over 37 feet to pay an additional 2% surcharge for every foot, or a fraction of a foot, in excess of this figure. Vessels of over 104 feet in width (a limit which is approximately increased by 3 feet for every foot of draught over 37 feet) were asked to pay an additional 1% surcharge for every six feet of excess of this width. By that time the biggest vessels (tankers) using the Canal had widths between 104 and 110 feet and the permissible maximum draught was 38 feet. Hence maximum surcharge imposed upon the biggest vessels was equal to 4% above the old rates of dues.(30) The Canal Authority justified the new surcharges on the grounds that wages and prices were rising and

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(29) Pet. Press Service, August 1961, p.311.

(30) See the Suez Canal Report - 1964. Also Pet. Press Service, July 1964, p.266 for new treatment of tankers which keep their washings on board.

that some rise in gross revenues became essential if enlarging the dimensions of the Canal would be continued in future with similar efficiency and speed as in the first years of nationalization. The Canal dues were increased after that twice; first, on 1st July 1965, second on 1st July 1966. In early 1967 Canal dues stood at 7/2.21d. per S. ton in cargo and 3/3.31d. per S. ton in ballast. The increase in dues had raised the cost of using the Canal but in fact only slightly. In the International Tanker Nominal Freight Scale, Intascale, a payment of 6/3d. per ton of oil carried was allowed for cost of using the Suez Canal in a round trip (i.e., 4/3d. for the South-North journey laden and 2/- for the return journey in ballast) and this figure was not altered in consequence of any of the increases which took place in rates of Canal dues. However the burden of the dues was bound to increase, even if these were kept constant, because of the employment of larger tankers which were continually reducing the cost of transport. This may be illustrated clearly in Table (61). The method adopted in calculating actual dues or, preferably, actual cost of using the Canal is explained with the Table. In column (3) the actual cost of using the Canal is expressed as the equivalent of lengthening the straight mileage by a certain

TABLE (61)

(1) Passage Through the Suez Canal. Size of Tanker in DWT.	Loading.	2 (a) Actual Cost of Using the Canal. Sh/d. per Ton.	(3) Approx. Equivalent to Lengthening Straight Voyage by	(4) Persian Gulf/W.Europe Saving in Distance by the Suez Canal over the Cape Route. (: Ave. 4,750 Miles) Actual
10,000	100%	8/7	835	3,915
20,000	100%	7/9	1,200	3,550
30,000	100%	7/4	1,550	3,200
50,000	100%	7/-	2,000	2,750
70,000 (b)	100%	6/8	2,400	2,350
85,000	90%	8/6 to 10/-	3,000 to 3,500	1,250 to 1,750
100,000	75%	11/- to 14/-	4,250 to 5,250	-500 to 500

Source: M. Hubbard, The Econ. of Transporting Oil, 1967, p.12.

(a) In calculating the figures of Column (2) a fixed sum per ton of oil, 6s. has been taken to cover the Suez Canal dues. This rate is approximately equal to the rate which is currently charged by tanker companies (6/3d.) to cover Canal dues in a round trip (i.e. ballast and cargo dues - see p.). Second, the cost of the loss of time together with bunkers consumed whilst a tanker waiting to enter the Canal and before resuming the journey was calculated for each size of tanker and added to the basic rate of 6/- per ton of oil. Mr. Hubbard explains that "an analysis of average times suggests that the net loss of time, allowance made for Canal mileage, is

approximately two days. In fact the smaller tankers lose slightly less actual time than the larger ones (i.e. easier to channel in the Canal) but as they are normally slower ships, and would therefore take longer to travel 100 miles (the Suez Canal passage) the net loss is virtually the same." P.11, Econ. of Transporting Oil. It should be noted that the cost of loss of the same amount of time was higher per ton of oil for smaller tankers. In the last two figures in Column 2 it is clear that the cost of underloading would raise actual cost of using the Canal considerably.

(b) Mr. Hubbard fairly assumed that a 70,000 d.wt. tanker is able to use the Canal fully loaded on the basis that the Canal's depth would have been increased to 40 ft. by the end of 1967 (the Canal was closed for the second time in its history in June 1967).

distance. Thus it becomes clear that the cost of using the Canal changes directly with the size of the tanker since the larger is the tanker the more capable it would be to run a longer distance at a lower cost. By comparing the figure given at the top of column 4 of the Table, which represents the saving in distance by the Canal over the Cape for the Persian Gulf/London voyage, with figures given in column 6 it would be realised that the larger the size of the tanker the lower would be the relative advantages of the Canal over the Cape. For tankers which could not traverse the Canal fully loaded the relative advantages of the Canal still decreases further because of the extra costs of underloading. However, it can be seen that it would still be advantageous to use a 85,000 d. wt. tanker 10% underloaded via the Canal than using it fully loaded via the Cape since the costs of 1,250-1,750 miles would be saved in this way. On the other hand it would be definitely uneconomic to send a 100,000 d. wt. 25% underloaded via the Canal when it is possible to send it fully loaded via the Cape at lower costs. The Canal would only be more advantageous when this 100,000 d. wt. tanker has to sail in ballast on its way to collect oil from the Persian Gulf since only ballast dues - about one

half of cargo dues - would be paid in this case.

The above analysis shows that in spite of the decrease in the relative advantages of the Suez Canal (consequent upon the increase in the size of the tanker) it was still uneconomic for any tanker less than 100,000 d. wt. to use the longer Cape route. To give a numerical example; the cost of transporting a ton of oil from the Persian Gulf to Europe via the Cape (approx. 10,000 miles) by a tanker of 100,000 d.wt. has been calculated at 26.6/-. This would be compared with 19.5/- per ton of oil if a tanker of 50,000 d.wt is used via Suez,(31) for the same destination (approx. 5,000 miles). Now adding the Canal dues (calculated by tanker companies at about 6.3/- per ton of oil) to the latter figure the cost per ton delivered via Suez would be almost equal to that of a tanker of 100,000 d.wt. operating via the longer route.

In 1966 any tanker of a capacity between 55,000 and 100,000 could only use the Canal when underloaded. Yet the cost per ton of oil was still cheaper in this way than when using the Cape route fully loaded.

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(31) Figures from M. Hubbard Econ. of Transporting Oil, p.47.

Whether a tanker would route via the Canal underloaded or via the Cape fully loaded, but at higher cost per ton carried, was a matter dependent on the supply of world tankers, and also on the conditions in the freight market. So far as these factors were concerned (explained below) the last decade was one that was characterised with a persistent surplus in tanker capacity and prolonged depression in freight rates. Under these circumstances large tankers which could not use the Canal fully loaded but which could not be routed at lower cost per ton via the Cape were best used in runs other than that between the Persian Gulf - Europe. Yet it was also more economic to use such tankers underloaded via the Canal than fully loaded via the Cape. It remains for us to emphasise that during the decade 1957-1966 the number of large tankers which could be used more economically via the Cape route instead of Suez, between the Persian Gulf and Europe, never represented more than a small proportion of the world tanker fleet. For example giant tankers of sizes of 100,000 d. wt. and over constituted only about 4% of world tankers in 1966.

Tanker Freight Rates.

The reasons for the depression in tanker freight rates during and after the Suez crisis have been analysed in Chapter 8 until the end of the 1950's. We saw then that AFRA and single voyage rates continued to fluctuate around the extremely low levels which were reached at the end of 1957 (See Diagram 53). If we may recall, this depression, which resulted from the Suez crisis, was intensified by the high rate at which world tanker fleet was increased; by about 50% between 1957 and 1962. During the years 1962-1966 world tanker fleet continued to rise, although at a slower rate owing to the depression in the freight market, and prevented any real recovery in rates. The oil industry and also big tankers shipping companies were keen to keep a safe reserve of tanker capacity over actual requirements in order to ensure that no shortage of ocean transport facilities would occur. This new attitude was the main feature in the tanker market since the first Suez closure. Table (62) shows the change in freight rates during the years 1961-1966 and in early 1967. It must be emphasised that a recovery in rates was not only prevented by the excess of tanker capacity over transport requirements but also by the fact that an increasing proportion of the newly built tankers consisted of

TABLE (62)

TANKER FREIGHT RATES.

(Percentages Above or Below Intascale)

Year.	AFRA +		Single Voyage Rates (Dirty)++
	General Purpose Tankers (up to 24,999 dwt)	Large Tankers (25,000 d.wt. and over).	
1961	-5.5	-14.7	-57
1962	-9.3	-18.0	-50
1963	-13.9	-22.2	-36½

	Gen. Purpose Tankers (up to 24,999 dwt)	Medium Tankers (25,000 to 44,999 dwt)	Large Tankers (45,000 dwt and over)	
1964	-22.0	-30.6	- 35.7	-44
1965	-19.4	-29.8	- 39.5	-43¼
1966	-18.7	-29.0	-41.4	-48½
1967 (January to May)	-24.1	-36.5	-46.4	-59

Source: Pet. Press Service.

+ Annual Averages of LTBP' average freight rate assessments which cover all tankers trading. Until 1959 there was only one index covering long and short term rates for tankers of all sizes. However, the growth in the size of the tanker necessitated a change in this system in 1959 and the index was subdivided so as to provide separate indicators for (a) general purpose and (b) large tankers. A second change in classification was introduced in 1964 as shown above.

large and giant tankers which could accept much lower rates of freight. This can be observed in Table (62) by comparing changes in rates of freight obtained by large tankers with those obtained by medium and general purpose tankers. Other reasons which depressed tanker freight rates during the period were: (a) the marked decline in tankers building costs; (b) the building of tankers with higher speeds which in effect increased the supply of effective carrying capacity; and (c) the fall in bunker oil prices (between 1956 and 1964 bunker fuel oil prices fell by about 20% and diesel oil by about 12%).(32)

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(32) Tanker building costs declined from about £85 per ton for tankers ranging up from 19,500 to 45,000 d.wt. in 1956 to about £50 - £55 per ton for a 19,500 d.wt tanker, £40 per ton for a 45,000 tanker and as little as £32 for vessels of larger sizes in 1964. Also in the ten years 1955-1964 the average speed of the tanker increased by two knots which represented a saving of about 5 days on a voyage from the Persian Gulf to Western Europe. See Tanker Markets in the Sixties. Pet. Press Service, May 1964.

Middle East Oil Traffic in the Suez Canal.

After analysing different factors which affected the flow of Middle East/Europe oil traffic through the three existing routes; the Suez Canal, the Cape of Good Hope and the Eastern Mediterranean pipelines we can see that the Canal still held the strongest situation until 1966. The development of the pipeline system was hindered by political factors and it became increasingly necessary to rely on tanker services at the Persian Gulf for Saudi Arabian and Iraqi oil exports to Europe. In discussing factors which affected the competition between the Canal and the Cape route we found that until 1966, and 1967, the gain to the longer route because of the rapid development in the size of the tanker did not represent any serious threat to the Canal. Admittedly an increasing number of large tankers was in position to route via the Cape route at a low cost per unit, but not however competing effectively with vessels of the same size and (but subject to various considerations) with vessels of smaller sizes using the Canal.

Table (63) shows the share of the Suez Canal in Middle East oil exports to Western Europe and America (north and south) in 1966 compared with 1955. (33)

(33) For purpose of more accurate comparison, 1955 would be considered instead of 1956 or 1957 since the figures of these latter years were distorted by the Suez crisis.

TABLE (63)

Middle East Oil Exports to Europe and America (north & south) [x]

	1955 Millions of Tons.	%	1966 Millions of Tons.	%
Via				
(a) Pipelines	40.0	36.4	62.0	24.0
(b) Suez Canal	65.0	59.1	166.5	65.0
(c) Cape route	5.0	4.5	28.0	11.0
(d) Total	110.0	100.0	256.5	100.0

(a) Source of data P.I.B. Memo., Feb.,1964 "Oil in the Middle East", also Pet. Press Service (reports regularly on oil business in the Middle East and elsewhere in the world)

(b) Source: Suez Canal Annual Report.

(c) The share of the Cape route is obtained by deducting (a + b) from total (d)

(d) Source: for 1955; the Banker vol. II 1956 and for 1966; B.P., 1966. Statist. Review of the World Oil Industry.

x All figures are approximate because of the various sources from which data are obtained.

It can be seen that this share increased by about 6% during the period and reached 65% by 1966. Middle East exports to West of Suez via the Cape route had increased considerably, indicating the new trend, but still constituted a small proportion of total shipments. On the other hand the relative importance of the Middle East pipelines was reduced remarkably by 12.4%. Obtaining more details about the distribution of the Suez Canal traffic by destination from Table (64) we would see, however, that the increase in West-bound oil traffic between 1955 and 1966 had in fact been accomplished by the tremendous growth in shipments to European countries other than Britain. Middle East oil exports to these countries via Suez increased from 36.3 m. tons in 1955 to 129.5 m. tons in 1966 and their share in total Canal traffic increased by 21.7% between the two respective dates. Meanwhile British oil imports through Suez increased at considerably slower rate and therefore as a percentage in total traffic they fell from 30.3% in 1955 to 13.5% in 1966.

TABLE (64)

SUEZ CANAL TRAFFIC (North-bound Oil Traffic)

	1955		1966	
	Millions of Tons.	%	Millions of Tons	%
To:				
U.K.	19.7	30.3	22.5	13.5
Rest of W. Europe	36.3	56.1	129.5	77.8
Total Europe	56.0	86.4	152.0	91.3
America (north & south)	9.0	13.6	14.5	8.7
Total	65.0	100.0	166.5	100.0

Source: Suez Canal Report, 1966

The following Table (based on figures given in Tables (57) and (64)) compares the British and European dependence on the Suez Canal in relation to oil imports from the Middle East in 1955 and 1966.

TABLE (65)

	1955		1966		Change Between 1955 & 1966
	a	b	c	d	
	Mil.Tons	%	Mil.Tons	%	$(\frac{c-a}{a})$ %
1) Britain					
Oil Imp. from the Middle East. +	25.0	100.0	44.0	100.0	75.2
- VIA -					
I) The Suez Canal	19.7	78.8	22.5	51.4	14.2
II) The Cape Route & Eastern Mediterranean Pipelines x	5.3	21.2	21.5	48.6	300
2) Other W. Europe					
Oil imp. from the Middle East ø	67.0	100.0	174.0	100.0	160
- VIA -					
I) The Suez Canal ø	36.3	54.2	129.5	74.4	257
II) The Cape route and Eastern Mediterranean Pipelines x	30.7	45.8	44.5	25.6	45

Source:

x Approximate figures, obtained by deducting the Suez borne oil from total oil imports of Middle East origin

+ See references given with Table (57) in this Chapter.

ø See references given with Tables (63) and (64) in this Chapter.

Table (66) gives a picture for the gradual decrease in the proportion of British imports which came via the Suez Canal in the period 1955-1966.

TABLE (66)

British Import of Oil from the Middle East.
(Mil. Tons)

	Total (a)	Came via Suez (b)	%
1955	24.900	19.688	78.8
1959	32.743	25.715	78.6
1960	38.530	30.214	78.5
1961	39.836	31.088	78.1
1962	40.505	31.040	76.5
1963	40.948	29.970	73.2
1964	41.528	29.381	70.8
1965	39.257	23.957	61.1
1966	43.784	22.528	51.4

(a) Source: Ministry of Power' Statistical Digest

(b) Suez Canal Annual Report.

Thus during the period under review Britain considerably reduced the proportion of Middle East oil imports which came via the Suez Canal and depended increasingly on alternative routes. Unfortunately statistics could not be obtained on British oil imports which came via Eastern Mediterranean and those which came via the Cape route from Middle East sources. Yet it would be logically deduced, on the basis of the analysis which has been introduced in this chapter, that it must have been Britain's increasing dependence on the Cape route which reduced the relative importance of the Canal. (See the discussion concerning the development of Eastern Mediterranean pipelines). It would be noticed from Table (67) that the proportion of Middle East oil channeled via the Canal was particularly falling during the last few years, i.e., 1964-1966, when the capacity of Eastern Mediterranean pipelines was almost constant but when the number of giant tankers which could route economically via the Cape route was rapidly growing. But the question which may be posed now is why did not the same factors affect other Western European's dependence on the Canal? Two reasons may account for this; (a) Britain was hit by the 1956-57 crisis more than any other European partner and her importers were therefore more active in diversifying sources of oil supply as well as in placing more dependence on alternative routes to the Canal; and (b) the relative advantages of the Canal

were greater for Mediterranean countries such as Greece, Italy and France and therefore the economies gained by using larger tankers via the Cape - instead of Suez - would be less apparent than they were to Britain.

During the years 1963-66 the growth of oil shipments to main European destinations was as follows:-

TABLE (67)

Mil. of Tons.

	1963	1964	1965	1966	% Change 1963/66.
Italy	24.3	31.4	41.4	50.3	+107
France	16.5	23.3	26.5	24.4	+49
U.K.	30.0	29.4	24.0	22.5	-25
Netherlands	15.3	15.7	16.5	15.2	+36
Belgium	7.9	8.3	10.2	10.7	+13
W. Germany	9.0	8.5	7.6	10.3	+14

Source: Suez Canal Annual Report.

Note that Italy's share in the Canal traffic had grown considerably during the four years 1963-66. With the exception of Italy, France had expanded her share in the Suez Canal's oil more than any other W. European country.

Britain's Oil Imports Via Suez in Relation to Her Total Oil Imports.

The importance of the Canal borne oil has been assessed in relation to total oil imports from the Middle East and we saw that it had been reduced remarkably throughout the ten years following the Suez crisis 1956-57. As has already been analysed earlier in this chapter, oil imports from the Middle East were also relatively cut down after 1960. Hence it would be naturally expected that the proportion of the Suez Canal oil in total British oil imports was heavily reduced during the period under review. Table (68) shows this situation clearly:

TABLE (68)

Year.	British Total Oil Imp. Mil Tons.	Imp. via Suez Mil Tons.	%
1955	36.740	19.688	53.7
1960	58.348	30.214	51.8
1962	67.198	31.040	46.1
1964	78.011	29.381	37.7
1965	86.680	23.957	27.7
1966	92.001	22.528	24.5

Sources given with previous Tables in this Chapter.

The Importance of the Suez Borne Oil in Britain's Total Energy Consumption.

In the earliest section of this chapter the considerable expansion in the share of oil in total energy consumption has been illustrated. Hence it may be the case that the relative importance of the Suez borne oil had increased during the ten years 1957-1966 in spite of the decrease in its share in total oil imports. To assess this matter quantitatively we need to know the amounts of the Suez borne oil which had been maintained for home consumption and used as fuels. Yet, since there are no statistics on these matters we may rely on estimation. It would be assumed, for each of the years that the proportion of total inland oil fuel consumption/total oil imports was equal to the amounts of Suez borne oil used as fuels at home/ total Suez borne oil. Total amounts of inland oil fuel consumption, as given by the Ministry of Power, would be smaller than total oil imports by: re-exports, bunker oil, and oil products not used as fuels (i.e., chemical feedstock, industrial and white spirits, lubricants, bitumen and wax). By volume, total inland consumption of oil fuel was equal to about 56% and 70% of total oil imports in 1955 and 1964 respectively and to about 71% in 1966.(34) The rise in this percentage reflected an increase

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(34) Source of data: Annual Abstract of Statistics, 1965, (No.102), Tables Nos. 156, 172 and 174. 1966' figures of fuel consumption are obtained from The Ministry of Power's White Paper on Fuel Policy, Nov. 1967.

in the proportion of oil that was retained for inland fuel consumption. Now, applying the same proportions to total imports of oil which came to Britain via the Suez Canal we would obtain the following figures:

TABLE (69)

Suez Borne Oil Used as Fuels in Britain.

	1955 Mil.Tons.	%	1964 Mil.Tons	%	1966 Mil.Tons	%
(a) Oil Came to U.K. via Suez.	19.7	100	29.4	100	22.5	100
(b) Retained for Fuel Consumption (approx)	11.0	56	20.6	70	16.0	71
(c) for Re-Exports, Bunkers & Industrial Usage other than Fuelling	8.7	44	8.8	30	6.5	29.

In the following Table (70) the amounts shown above in (b) have been converted into million tons of coal equivalent (using the Ministry of Power's rate of conversion: 1.7 tons of coal = 1 ton of oil) and are compared with total inland fuel consumption.

TABLE (70)

TOTAL INLAND FUEL CONSUMPTION

Mil. Tons of Coal of Coal Equivalent

	1955	%	1964	%	1966	%
Net Coal Consumption	213.5	85.8	186.6	65.4	174.7	58.8
Petroleum (Total)	34.5	14.0	93.3	32.7	111.7	37.6
(Via Suez)	(18.7)	(7.5)	(35.0)	(12.2)	(27.2)	(9.1)
(Via Other Routes)	(15.8)	(6.4)	(58.3)	(20.4)	(84.5)	(28.5)
Nuclear and Hydro-Electricity and Natural Gas.	1.0	0.04	5.4	1.8	10.2	3.5
Total Fuel Consumption	249.0	100.0	285.3	100.0	297.7	100.0

Thus, in 1966 the share of the Suez borne oil in total inland fuel consumption was higher by 1.6% than in 1955 but lower than in 1964 by 3.1%. The explanation of this situation is that of the Suez borne oil, although it was markedly reduced in relation to oil coming via other routes, the relative contribution to total inland fuel consumption was increased (particularly up to 1964) because of the decline in the amounts of coal fuel, and the considerable growth in the usage of oil fuel itself.

APPENDIX F.

Total British Trade and Shipping Interests in Suez:

Total U.K. imports from Commonwealth and foreign countries East of Suez are shown by country and by main categories for 1963 in Table (F-1).(1) Several footnotes have been inserted to give more details, particularly about import trades which depended only partly on the Suez Canal. However, for a more precise picture about Middle East fuel which depended on the Canal see Chapter (9). It can be realized from the Table that British imports via Suez consisted predominantly of foodstuffs, basic and industrial materials and fuels. The increase in the cost of transporting this British trade or the interruption in its arrival would directly affect the cost of living and industrial outlay on raw materials.

Table (F-2) presents a picture for total British import and export trades conducted with countries in East

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(1) Similar detailed statistical account as that given in this Table could not be compiled for the more recent years. The last number of the Annual Statement of the trade of the U.K. which has been available in the principal British libraries was published in 1965 and concerns 1963. Yet on the basis of figures obtained from the monthly accounts of British trade there could bot be much change in the picture presented here.

TABLE (F - 1)

U.K. IMPORTS FROM COMMONWEALTH COUNTRIES EAST OF SUEZ (1963)

Figures in Millions of £ Sterling

Country	(a) Food, Live Animals, Beverages & Tobacco	(b) Crude Materials	(c) Mineral Fuels & Lubricants	(d) Animal & Vegt. Oils & Fats.	Total* (a), (b) (c) (d)	% of Total Imports	Total Imports
Tanganyika					15.7	100	15.7
Zanzibar					.2	100	.2
Kenya	13.3	3.9			17.2	93.0	18.5
Mauritius	31.8				31.8	100	31.8
Aden					11.3	100	11.3
Bahrain			14.0		14.0		15.1
Qatar			5.6		5.6	100	5.7
Persian Gulf Protectorates			8.2		8.2	100	8.2
India	89.9	12.3	.2	.8	103.2	73.3	140.7
Pakistan	1.7	19.2	.3		21.2	74.4	28.1
Singapore	2.5	11.0	.3	.5	14.3	86.1	16.6
Malaya	1.2	19.0		3.1	23.3	91.7	25.4
Ceylon	38.0	1.9		.7	40.6	97.8	41.5
British N. Borneo		.9			.9	100	.9
Sarawak & Brunei	.5	1.8	2.4		4.7	90.4	5.2
Hong Kong	.7	1.1			1.8*	2.6	68.2
Australia	109.2	68.3	.4	1.0	178.9[x]	86.8	206.1
New Zealand	128.8	41.8		.7	171.3[y]	99.0	173.1
Total (except New Zealand					492.9	77.1	639.2

Notes to Table (F - 1) (Commonwealth)

* Other sections in import list are chemicals, manufactured goods, machinery and transport equipment and miscellaneous manufactured articles.

x Most of this trade came via Suez, in particular the first section.

y Most of this trade depended on routes other than Suez.

Ref: Annual Statement of the Trade of the U.K., 1963., Vol. IV.

Notes to Table (F - 1) (Foreign)

* Other sections in import list are chemicals, manufactured goods, machinery and transport equipment and miscellaneous manufactured articles.

\+ Trade with foreign countries East of Suez other than those shown in the Table was negligible.

++ Trade with Iraq was partly conducted via Fao (Persian Gulf) and partly via Syrian and Lebanese ports. Trade with Saudi Arabia was also carried partly via Saudi ports in the Gulf and partly through Eastern Mediterranean ports.

Ref: Annual Statement of the Trade of the U.K., 1963, Vol. IV.

TABLE (F - 1) (contd.)

U.K. IMPORTS FROM FOREIGN COUNTRIES EAST OF SUEZ (1963)+

Figures in Millions of £ Sterling

Country	(a) Food, Live Animals, Beverages & Tobacco	(b) Crude Materials	(c) Mineral Fuels & Lubricants	(d) Animal & Vegt. Oils & Fats.	Total* (a) (b) (c) (d)	% of Total Imports	Total Imports
Ethiopia					1.8	94.7	1.9
Sudan					11.0	90.2	12.2
Saudi Arabia++			13.2		13.2	100	13.2
Yemen		.2			.2	100	.2
Kuwait			150.7		150.7	99.8	151.0
Iraq++	.8	.3	60.1		61.2	99.2	61.7
Iran	.7	4.4	26.2		31.3	90.7	34.5
Afghanistan		3.6			3.6	72.0	5.0
Burma	7.3	3.4	.2		10.9	97.6	11.3
Thailand					5.0	97.0	5.2
Vietnam (North & South)					2.8	96.6	2.9
Cambodia					.2	100	.2
Indonesia	2.0	1.1	5.6		8.7	94.6	9.2
China (incl. Manchuria)	2.0	9.8		.4	12.2	66.0	18.5
Formosa					.4	40.0	1.0
Korea (north & south)					.6	85.7	.7
Japan	21.0	4.0		1.8	26.8	50.9	52.7
Philippines	.3	3.1			3.4	91.9	3.7
Total					344.0	89.3	385.1

TABLE (F- 2)

BRITISH TRADE EAST OF SUEZ.++

1966

		IMPORTS £ m.	EXPORTS £ m.
I	Australia	208.185	258.049
	New Zealand	187.119	127.431
II	Asian Countries in the Far East	453.498	487.038
	Commonwealth	316.839	331.686
	Others	136.659	155.352
III	Countries on + the Eastern Coast of Africa	72.610	86.356
	Commonwealth	65.848	64.741
	Others	6.762	21.615
IV	Middle East	287.587	146.740
	Commonwealth	50.714	31.183
	Others	236.873	115.557
	Total British Trade with all Countries (East of Suez and Others)	5,953.952	5,236.040

++ For definition of the Categories see Chapter (6)- Figures including Re-exports.

\+ Tanzania, Kenya and Countries North of them, and including Mauritius and Sychelles.

Basic Data compiled from "Overseas Trade Accounts of the U.K" (December 1966 with cumulative totals)

Africa, the Middle East, Far Eastern Asian countries and Australasia in 1966. By dividing this British trade according to the degree of its dependence on the Suez Canal we have been able in Chapter 8 to reach an estimation, by value, for the size which depended on this route. On that basis it has been estimated that in 1955 about 19% and 21% or more of the value of British exports and imports (with various trading areas in the world) were shipped via Suez. Using a similar method, but taking account of the decrease in the proportion of Middle East oil that came to Britain via Suez in recent years, I have come to the conclusion that in 1966 only about 14% and 12% respectively of total British exports and imports used the Suez Canal. This is however a low estimate (see chapter 8) and if we take into account all traffic which possibly used the Canal in 1966 we may find that probably 15% of British imports and 16% of exports depended on the Suez route. But this latter estimate would be compared with that of 1955 which showed that about 25% of British trade had possibly been via Suez.

The decline in the relative importance of the Canal between the two dates which preceded the first and second closures of the Canal can be attributed to two main factors; <u>firstly</u>, the decline, both in absolute and relative terms,

of most of the main trades conducted with East of Suez.

Examples: in mil. of £.

	BRITISH IMPORTS		BRITISH EXPORTS	
	1955	1966	1955	1966
Australia	263.9	208.2	286.4	258.1
India	186.6	119.8	168.1	96.8
Malaysia & Singapore	85.2	48.1	74.5	90.9
Kuwait	125.4	92.9	8.1	26.0

The decline in oil trade from the Middle East has been described with factors behind it in Chapter 9. The decline in other Eastern/British trades was due to the growth in inter-Eastern trade to;Eastern countries (Asian in particular) making more serious attempts towards industrial development; and to their trade policies. On the side of Britain there was a rapid growth in the trade conducted with European countries particularly members of the Common Market. There was also a marked increase in the trade with the communist block of eastern Europe during the last decade. Secondly, there was the increase in shipments of Middle East oil via the Cape route, as described in Chapter 9.

The decrease in the volume of British trade via the Suez Canal during the last ten years can be seen in the light of the following figures as obtained from Suez Canal Annual Reports.

TOTAL BRITISH TRADE VIA THE SUEZ CANAL

Million of Tons Weight

1958	1959	1960	1961	1962	1963	1964	1965	1966	
31.6	34.2	38.7	39.5	39.8	38.2	37.1	31.6	30.1	Total
24.3	25.7	30.2	31.1	31.0	30.0	29.4	24.0	22.5	Oil Imports
7.3	8.4	8.5	8.4	8.8	8.2	7.7	7.7	7.6	Other Goods (exp. & imp.)

With the exception of 1965 the volume of British shipping in the Suez Canal, i.e., vessels flying the British flag, was rising. Yet this development was much slower than the general rise in Canal traffic, and therefore the share of British flag continually decreased.

The slower growth of British shipping in the Suez Canal was partly reflecting the slower growth in British trade East of Suez. The fall in the share of British flag in the Canal traffic was not however a new phenomenon and it was firmly linked with the decline in the share of British shipping in the world. See Table (F-3) for the continuous fall in the percentage of British shipping in the Canal.

TABLE (F - 3)

SUEZ CANAL TRAFFIC

	U.K. Flag % of Total
1870 - 80	76.1
1881 - 90	78.0
1891 - 00	70.0
1901 - 10	62.3
1920	61.7
1929	57.1
1938	50.4
1949	36.1
1955	28.3
1962	21.7
1964	19.5
1965	16.8
1966	16.6

Source: Suez Canal Statistics.

APPENDIX G.

THE SECOND CLOSURE OF THE SUEZ CANAL, JUNE 1967 -

The Suez Canal was closed for the second time as a result of a short war between Egypt and Israel in the first week of June 1967. The Egyptian government declared that navigation in the water way would be resumed only after the Israeli troops had withdrawn from the positions which they had occupied on the Eastern bank of the Canal in the June war. The decision has been seen in Britain and other Western countries from its political angle: the Suez route would remain closed until they have put sufficient pressure on the Israeli government to withdraw its troops from Egyptian land. Whether or not that was the Egyptian government's intention it is definite that the Canal could not, and would not be cleared from block-ships and other hindrances to navigation as long as the Israeli remained in the Canal zone, i.e., in a state of war with Egypt. Since June 1967 several heavy military clashes happened across the Canal and therefore even if it was open it would have been of little or no use to commerce. The rise in maritime insurance rates would always discourage, or prohibit, vessels from navigating in areas that are subject to war activities.

Thus for the first time since its opening the Suez Canal has remained entirely shut (containing 15 vessels trapped inside) for ten months now. Besides, judging from the trend of political events it can not be forecast whether or not it will be re-opened for navigation within the coming months of this year. It is early yet to make any precise estimation of the effects of the second closure of the Canal on British shipping and trade interests in the East. It is possible however to draw an outline for the outstanding features of the present crisis and in the light of the 1956 experience we may be able to obtain some useful conclusions.

I. Oil;

1 - General information and provisional statistical records indicate that the present closure of the Canal has not - so far - by itself caused any notable decrease in world oil supplies. In 1956 when the Canal was closed the productive capacity of the Middle East oil field was also considerably reduced owing to the problem of finding sufficient tanker tonnage to export the produce to the Western market via the Cape route. In 1967 the situation was different in that a tanker capacity of about 3.5m. tons was employed in the grain trade or laid up for lack of employment when the Suez route was closed. Besides, about 3 m. tons of vessels designed for both ore and oil

trades were freed and used for carrying oil. The freeing of tankers from the grain trade and the switching of ore carriers to oil business was made gradually during the few months following June 1967. This process was facilitated by the surplus of tonnage which existed in the dry cargo market, by the expected delivery of about 4 m. tons of new bulk carriers during the second half of 1967 and by the rise in oil freight rates.(1)

The situation would have been further eased if the rate of addition to world tanker fleet in the first half of 1967 (2.6%) had been as high as that in the corresponding period in 1966 (4.3%) or in the second half of 1966 (6.9%). Expressed in millions of dwt, deliveries of new tankers in the first half of 1967 amounted to 3.065m. dwt. and thus were over one million dwt. less than in the first half of 1966. However about 6m. dwt. were expected to be added to world tankers in the second half of 1967 and about 11m. dwt. for 1968.(2)

Thus the surplus in tanker tonnage prevented a shortage in oil supplies from developing because of the Canal closure and thus offset a possible rise in f.o.b. oil prices (i.e. considering this factor alone) as happened in 1956. Equally important is that the

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(1) The ECONOMIST, July 22, 1967, p.348.
(2) Figures from World Tanker Fleet Review 1967 by J.I. Jacobs & Co.

maintenance of Persian Gulf oil supplies via the Cape has so far saved Western Europe from relying unduly on the dollar area's oil.(3)

2. - The increase in demand for available tanker tonnage after the Canal closure was naturally accompanied by higher freight rates, not only in the Persian Gulf/Europe run but also in all other oil routes in the world. Single voyage rates from the Persian Gulf (Mena Al Ahmadi) to U.K./Continent jumped from 23/5d. per ton of oil carried (via Suez and including dues) by the end of May to 144/4d. per ton (via Cape) by the end of June. In the Caribbean, single voyage rates rose from a pre-crisis 12/6d. per ton of oil carried on the Curacao-London route to 55/10d. per ton during the same first month of the Suez closure. The spot market rates continued to rise and showed distinct peaks in July and August but since then they started to decline steeply. Yet the latest information on the situation (January 1968) shows that spot rates are still much above the pre-crisis level. Changes in AFRA (Average Freight Rate Assessment) followed more or less the same pattern but naturally their fluctuations were considerably less violent. Until June 1967 the LTBP published AFRA every six months but because of the abnormal situation following

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(3) Britain's heavy purchase of dollar area oil (U.S. and Caribbean) during June-August 1967 was due to the oil embargo imposed by Arab countries.

the Middle East crisis it was decided to give a monthly assessment. (See Table (G - 1) for changes in tanker freight rates during 1967). It will be noticed that: (1) fluctuations in large tankers' rates were relatively moderate since the market of these tankers would be less linked with the Suez Canal; and (2) that the rise in rates in general was much less violent than in 1956 owing to the surplus of tonnage existing before June and keeping rates at low levels. One point to be emphasised here is that these two features, i.e., the employment of larger tankers and the surplus in tonnage - were partly a product of the 1956 Suez closure. (See Chapter 9).

The decline in freight rates after September was a sign that indicated that the new additional demand for tanker tonnage created by the Suez closure was satisfied and that re-routing of Persian Gulf traffic via the Cape was completed. From that time new tanker deliveries began to depress freight rates once again. Yet the fall in rates after September has not been as steep as before the crisis since a considerable portion of the new deliveries must have been planned with the intention of using the Canal and not the Cape route. It is quite possible therefore that tanker freight rates may well rise again should oil shipments from the Persian Gulf be developed at the same high rate as before June 1967, or at a higher rate, while the Canal remains shut.

TABLE (G - 1)

TANKER FREIGHT RATES

Percentages Above or Below Intascale

AFRA

1967	General Purpose	Medium Tankers	Large Tankers	Single Voyage (Dirty)
Jan/May	-28.7	-38.7	-46.6	-59
June	- 6.8	-13.3	-32.9	+13.5
July	+17.7	+13.9	- 6.9	+73
August	+21.8	+16.0	- 9.2	+71
September	+26.7	+20.3	- 8.1	+56
October	+23.8	+17.1	-12.3	+15
November	+22.4	+12.5	-13.9	+10
December	+13.4	+9.2	-14.9	+ 2.5

Source: Compiled from Petroleum Press Service June 1967 - Feb. 1968

In fact the rise in rates during June - September was caused not only by the re-routing of the Suez oil traffic via the Cape but also by the need to ship under this condition extra amounts from the Persian Gulf to Western Europe in order to compensate for the loss of most of Arab oil which is normally available at Mediterranean terminals. After the full resumption of oil exports from Mediterranean terminals - mainly during September - shipments from the Gulf were reduced to the pre-June rate, or possibly a little lower, and that was one of the factors that has checked the rise in freight rates.

On the other hand the re-opening of the Suez Canal would certainly depress freight rates because it would re-establish a hugh surplus of tanker ton age in the world market. However, theoretically speaking, this link between the re-opening of the Canal and freight rates would be growing weaker with the increase in the number of tankers that can be used best via the Cape route. In 1967 any tanker of 100,000 tons and over was definitely used best via the Cape in its return voyage from the Persian Gulf (see Chapter 9). Since last June maintenance and improvement projects in the Canal have been completely stopped whilst the number of new orders for tankers of sizes above 100,000 tons has been continuously rising.

3. - Unlike 1956 the stoppage of Arab exports from Mediterranean oil terminals in 1967 was partly due to political reasons (Arab oil embargo against Western countries which allegedly supported Israel during the June war) and partly because of disputes between oil companies and Arab governments about posted prices after the Canal closure. The latter case is our concern here. After the June war, oil supply was completely stopped from Libya until the first week of July and from Saudi Arabia's Tapline until the third week of September. The governments of these two countries had demanded from their oil companies an increase of posted prices at the Mediterranean terminals since the relative advantages of these (freight savings) have considerably increased by the closure of the Suez Canal and the necessity to route Persian Gulf oil via the Cape. In September Aramco reached a compromise with the Saudi government by agreeing to eliminate - so long as the Canal remained closed - the OPEC'S 6.5% allowance off posted prices at Sidon (Tapline terminal) whilst leaving it as before the crisis at Persian Gulf ports. This allowance has been given in the past to oil companies by all members of OPEC (the Organisation of Petroleum Exporting Countries) because it was recognised that posted prices were rather high. Being deducted before tax it has reduced the oil companies royalty and tax

payments. Libya obtained a similar solution to that of Saudi Arabia also during September but it was to be applied retrospectively since oil exports had actually started in the first week of last July. The Libyan government estimated that the dropping of 6.5% allowance would increase its revenue by 8.5 U.S. cents per barrel (or by $65 m. a year).

Thus a price differential was established between the Mediterranean terminals and the Persian Gulf because of the Suez closure and this subsequently raised c.i.f. oil prices in Western Europe.

To sum up: the effect of the second closure of the Suez Canal on oil trade has been confined so far to increases in c.i.f. prices in Western Europe consequent upon two main factors; first, the rise in the cost of transporting oil from the Persian Gulf, and second, the rise in f.o.b. prices at the Mediterranean terminals as a result of the increase in their relative advantages due to the first factor.

It is not easy however to determine the contribution of the Suez closure to the rise in inland oil prices of 2d. per imperial gallon which took place in Britain after the start of the emergency last summer. On the one hand this rise took place not only because of the Suez closure and the consequent rise in freight rates every where in

the world but also because of the Arab oil embargo imposed on shipments to Britain until the first week of September and the interruption in Nigerian oil supplies. (The latter factors necessitated heavy imports of oil from the Western Hemisphere at higher cost). But, on the other hand, oil companies in Britain retained the surcharge of 2d. a gallon after September when the Suez closure became about the only factor that continued to affect import prices. In fact they further asked the government to allow for a second surcharge as the first in their opinion had been inadequate to cover the whole additional expenditure incurred by the oil industry during the crisis. In Italy the government refused to authorise any immediate increase in oil prices after the Suez closure and promised the companies some relief, after January 1969, from the proceeds of the special gasoline tax of 10 lire per litre. In France which has not suffered from any Arab boycott and whose Mediterranean imports from Algeria and Iraq continued almost without interruption, oil companies were granted a surcharge of 2 fr. per hectolitre (about 1½d. per imperial gallon)(1) to cover extra expenditures due to the Suez closure. The surcharge was considered inadequate

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(1) Quotations of exchange before the Sterling devaluation.

by companies. In West Germany where oil companies are free to fix their market prices these were up by 5 pfennigs per litre (about 5d. per imperial gallon)[1] because of the Suez closure and the interruption of Mediterranean supplies.

In January 1968 the OECD produced a provisional estimate of the direct effects of the Suez closure on the cost of oil shipments into the main countries of Western Europe. This is given in Table (G - 2).

TABLE (G - 2)

ESTIMATED EFFECT OF SUEZ CANAL CLOSURE ON COST OF OIL IMPORTS.
July - December 1967.
(All figures in £ mil. - Imp. c.i.f.)

	Hypothetical Non-Crisis Import Cost.	Estimated Actual Import Cost.	Difference in Cost.
U.K.	950	1,150	200
W. Germany	540	630	90
Italy	550	630	80
France	730	770	40

Source: OECD (formerly OEEC)[2]

According to this estimation the U.K. has had by far the highest cost increases although its oil traffic in the Canal was less than half by 2.5m. tons than that of Italy (and also was smaller than the French traffic - see Chapter 9). The main confusion seems to have arisen from the inclusion of the costs arising from the Arab oil boycott and the interruption in Mediterranean supplies.

(1) Quotations of exchange before the Sterling devaluation.
(2) OECD - Organisation for European Co-operation & Development, formerly Organisation for European Econ. Co-operation.

Thus the U.K. suffered most, followed by West Germany and then came Italy whilst France which suffered principally from the Suez Canal closure has had the least rise in costs. The OECD also estimated the additional cost likely to arise if the Canal should remain closed during the whole of 1968. The estimates are given in Table (G - 3).

TABLE (G - 3)

ESTIMATED EFFECT OF SUEZ CANAL CLOSURE ON COST OF OIL IMPORTS.

Jan. - December 1968.

	Oil Imports Re-routed Round Cape (Mil. Tons)	Additional Freight (£ per ton)	Total Additional Cost (£ Mil.)
U.K.	40	1.2	50
W. Germany	27	1.6	40
Italy	40	2.2	90
France	17	1.7	30

(Source: OECD)

It can be seen that the additional freight cost per ton varies between one country and another according to the distance saved by the Canal over the Cape. Thus the lowest increase in cost per ton is in the case of U.K. and the highest in the case of Italy. In calculating additional freight cost it has been estimated that tanker freight rates would continue to fall during 1968 and would even revert to their pre-crisis level.

The final point for comment is the small figure of Italian oil imports via the Cape estimated for 1968. The OECD must have assumed that not all Italian imports which normally came via the Canal (41.4 and 50.3m. tons in 1965 and 1966 respectively) would be re-routed via the Cape. In the case of U.K. 40m. tons oil imports included shipments which came via Suez and via the Cape before June 1967 (Total U.K. imports from the Middle East in 1966 were 43.8m. tons).

II. Merchandise Other Than Oil:

1. - Before the closure of the Canal in June tramp rates were generally depressed and lower than those prevailing in the trade in any of the previous three years. As in the case of tankers there was a large supply of tonnage existing in the market and that prevented rates from recovering. The routing of the Eastern traffic via the Cape after June gave excellent opportunities to tramp owners. The withdrawal of a large volume of tanker tonnage from the grain trade for oil and the chartering of a good number of ore/bulk/oil carriers for the same purpose raised dry cargo rates steeply during June and July. But due to the pre-crisis situation and the continuous additions to world fleet at a rather high rate, the rise in tramp rates could not be as sharp as in 1956. Indeed tramp rates fell in

August, increased anew in September and then in the following months fluctuated in each trade according to the normal seasonal demand, with a general tendency downwards. However until December 1967 both voyage and time charter rates were much above the rates which ruled in the corresponding month in 1966 or indeed in any year since the 1956 crisis. (See index number of tramp shipping rates constructed by the U.K. Chamber of Shipping and published annually in its Report (or in Annual Abstract of Statistics), and see also quotations from this index in Table (G-4)).

As in 1956 the closure of the Canal created a different situation for cargo liners which in fact carried the major part of British and European trade with the East of Suez. (See p. 388 to 395). To keep their shipping schedules between various Eastern and Western ports and to fulfil their normal commitments to East African and Mediterranean ports while the Canal is closed an additional number of vessels has been chartered. The rise and the fall in tramp shipping rates since last June have therefore raised or reduced - but did not eliminate - the additional expenses which liner firms have borne. Until the Suez route is re-opened this situation will remain. Besides unlike tankers or ore carriers, liner cargo ships have not grown much in size since the 1956 crisis. The analysis of the U.K. shipping

fleet on 30th June 1967 showed that only 3 cargo liners were in the largest size of 14-14,999 gross tons. Passenger/cargo liners were relatively of larger sizes but again there were only 7 of these vessels in the largest size of 30,000 gross tons and over. Thus unlike large tankers and ore/bulk carriers, the re-routing of cargo liners round the Cape during the present crisis increased considerably the outlay of shipping companies and involved them in a problem similar to that of 1956.

2. - The structure of British non-oil trade via Suez remained almost unchanged after 1956. Table (6 - 5) shows the quantities of the principal commodities which Britain imported in 1965 via the Canal. British non-oil imports via the Canal were generally affected by changes in trade pattern. Yet imports of cereals and ore particularly from Australia were affected by the growth in the employment of larger vessels. As in 1956 British exports via Suez consisted mainly of machinery, iron and steel goods, chemical products, motor vehicles and textiles and were distributed over a wide range of countries in East Africa, Arabia, the Far East and Australia. It is too early to estimate the effect of the present closure of the Suez Canal on these trades. Judging by 1956 experience would not help much because of the difference in the course of freight rates and the length of the closure.

TABLE (G - 4)

U.K. CHAMBER OF SHIPPING

Index Number of Tramp Shipping Freights (1960 = 100)

	May		June		July		August		Sept.		October		November		December	
	1966	1967	1966	1967	1966	1967	1966	1967	1966	1967	1966	1967	1966	1967	1966	1967
Coal	75.5	82.0	76.4	93.4	80.7	110.4	76.1	-	89.2	117.3	94.5	144.4	85.8	117.0	94.1	112.1
Grain	126.8	113.8	123.4	131.7	116.6	133.8	123.2	126.5	114.2	147.5	110.6	141.8	112.8	144.2	116.0	150.5
Sugar	-	99.9	99.7	98.4	98.8	105.2	102.7	97.4	-	103.7	-	105.5	-	108.5	99.9	104.6
Ore	89.8	-	85.8	-	86.0	-	-	-	82.7	-	75.1	115.3	70.2	-	-	-
All Items	113.3	109.8	110.9	113.5	107.8	138.0	108.0	113.2	104.2	125.8	105.8	139.8	104.1	146.3	115.5	145.8

(Voyage Charter)

Source: Chamber of Shipping of the U.K. Annual Reports 1966-67 and 1967-68.

TABLE (G - 4) (contd.)

INDEX NUMBER OF TRAMP RATES (1960 = 100)

Voyage Charter

	1966	1967
Jan.	124.1	100.5
Apr.	123.4	103.7
Jun.	110.9	113.5
Jul.	107.8	138.0
Aug.	108.0	113.2
Sept.	104.2	125.8
Oct.	105.8	139.8
Nov.	104.1	146.3
Dec.	115.5	145.8
Year	113.5	120.5

Time Charter (Motor Ships)

	1966	1967
Jan.	148.6	117.9
Apr.	142.2	121.3
Jun.	135.2	121.3
Jul.	115.4	133.1
Aug.	136.1	129.9
Sept.	132.2	146.5
Oct.	118.3	146.9
Nov.	117.9	148.6
Dec.	118.3	138.2
Year	132.4	130.4

Source: Chamber of Shipping of the U.K.
Annual Reports 1966-67 and 1967-68

TABLE (G - 5)

PRINCIPAL COMMODITIES IMPORTED INTO BRITAIN VIA THE SUEZ CANAL in 1965.

Commodities	000 Tons	Main Sources
Metals and Ores		
Manganese	72	India, U.A.R. and Australia
Ilmenite	230	
Zinc	135	
Sugar	727	Mauritius, Australia, India and Philippines.
Cereals	799	Australia, Burma, China and South Africa.
Fruits	232	Australia, East Africa, Arabian Gulf, India, Pakistan and Ceylon.
Oil Seeds & Veg. Oils	106	Philippines, China, Sudan, Indonesia and India.
Oil Seed Cakes	415	India, Sudan, Philippines, Indonesia and Burma.
Textile Raws	223	Pakistan, Australia, E. Africa and India.
Rubber	104	Malaysia and Indonesia
Timber	146	Philippines, Malaysia, Burma and Indonesia
Tea	152	India and Ceylon
Meat	106	Australia and East Africa.

(Compiled from Suez Canal Report 1965).

CONCLUSIONS[x]

The revolution of oceanic transport between the East and the West in 1869 and in the following years of the 19th century was a product of two factors; the opening of the Canal and the substitution of steam ships for sailing vessels. The Suez Canal performed the principal role in that it greatly shortened the distance between the East and the West and also hastened and fostered the employment of steamships. The revolution of transport was manifested in considerably quicker, cheaper and more regular shipping services; and under these conditions a new era was begun in the trade relations between East and West of Suez. The building of telegraphic communications between these two separated regions of the world since 1869 had also strengthened the links between their markets and promoted the growth of their trade. British imports for home consumption from the East gained considerably after the opening of the Canal. Fresh foodstuffs and cheaper raw materials which never came from the East before 1869, or came in very small amounts, were now imported in progressively increasing

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[x] The sole purpose of these conclusions is to present the main line of the research project with the principal results which have been established. For a detailed picture see conclusions that have been reached within the foregoing Chapters.

volumes and at cheaper prices than any where else in the world. The sharp reductions in freight rates also cheapened the costlier commodities of the East and stimulated their importation.

The opening of the Canal however was unfavourable to British imports from the East which were used for re-exports. Until 1869 European countries imported most of their needs from the East via Britain. This British entrepot trade was particularly prosperous during the quarter of century or so which preceded the opening of the Canal in spite of the adoption of free trade and the abandonment of Navigation Acts in Britain and her empire. Now after the Canal was built European countries were willing to develop their direct trade with the Eastern world and they were encouraged by the saving in the time and the cost of the Eastern voyage as well as by the elimination of the commissions of the British middleman. Besides, the substitution of steam for sail played an important role in encouraging the Europeans to build their own fleets and this factor in turn greatly served the growth of their direct trade with the East. The only gain - yet quite considerable - which accrued to Britain from this development came through the major contribution of her shipyards in the building of the new European fleets. The development of European direct trade with the East was not however

of any significant influence for the growth of Britain's entrepot trade during the fifteen years which followed the opening of the Canal. That was due to two main factors; first, Britain's well established monopolistic situation in the Eastern trade before 1869 which enabled her to gain considerably and immediately from the opening of the Canal; and second, the continuing dependence on the Cape route for the Australian trade which gained however from the competition between sailing and steamships.

These latter two factors were also quite essential to the rapid growth of British exports of home and foreign manufactures to the East during the 1870s and the early 1880s. The growth of British exports to the East after 1869 was also promoted by free trade (which was adopted by the largest part of the Eastern market) and by the rise in the purchasing power of the Eastern consumers consequent upon the great growth in their exports to West of Suez. However in the late 1880s the rate of growth of British exports to the East began to slow down as a result of the growing European competition. No doubt this competition was backed by the rise in European industry operating under free trade conditions. Yet in fighting to gain from Britain some increasing portion of the Eastern market the European competitors were most certainly helped by factors which

revolutionised transport. An important factor which particularly depressed the share of Britain in the Eastern market during the late 1880s and the 1890s was the policy of the Shipping Conference. Consequent upon this policy British goods were carried to the East at high rates of freight whilst European and American goods exported to the same destination continued to benefit from the favourable conditions prevailing in the free freight market since the opening of the Canal.

The influential role played by the Suez Canal in changing freight rates and in affecting the volume, the pattern and the geographical distribution of the Eastern trade was nearing an end by the early years of this century. New factors became more important in affecting the development of British trade in the East. The first War circumstances reduced European trade in the East but at the same time paved the way for the growth of Japanese and American trades and stimulated the development of modern industry in India. The American trade in the East was particularly encouraged by the opening of the Panama Canal in 1914. These factors - besides the general circumstances arising from the monetary crisis of the 1930s and the mounting threat of a second major war - exerted depressing effects on British/Eastern trade during the inter-war period. But, however, the growth of this trade was still protected by the strong political

and economic relations between Britain and her Empire in the East, a link which was significantly strengthened in 1932 - after the abandoning of free trade and by the signing of the Ottawa Agreements for Imperial Preference.

The dependence of British/Eastern trade on the Suez Canal during the inter-war period was influenced by all the above factors as well as by others which determined the choice between the Canal and other alternative routes. The cutting of the Panama Canal opened a new route to British/Australasian trade. Compared with other Eastern trades this trade was least dependent on the Suez Canal but its growth was much faster than them. British/New Zealand trade was definitely attracted to the new route but the British/Australian counterpart continued to flow mainly via Suez and the Cape route as before 1914. Yet the flow of Australian traffic in the Suez Canal became particularly sensitive to all factors which would affect the relative advantages of this route. Thus, during the 1930s the Australian traffic in the Suez Canal was more affected than any other Eastern traffic by the rise in the "actual Canal dues", the increase in maritime insurance rates during the Italian campaign in Abyssinia and the Spanish Civil War, and the availability of cheaper bunkering fuel on alternative routes.

The spectacular growth in British oil imports via the Suez Canal during the post-Second War period changed completely the importance of this route to Britain. The growth of this trade which by any measure exceeded that of any other single trade Britain conducted East of Suez was closely linked with the continuous discoveries of rich oil resources in the Middle East area. Since the late 1930s the production of oil in North Iraq was most economically exported to Europe via pipelines to the Eastern Mediterranean coast. During the post-war period attempts of oil companies to export their Persian Gulf produce to Europe in the same way were of very limited success due to political factors which either completely prevented the building of pipelines, closed them after being built, or considerably reduced their relative advantages over the longer route via the Suez Canal. Of British oil imports from the Middle East in the first half of the 1950s only 15 to 20% came via Eastern Mediterranean pipeline terminals (mostly from Iraq) and the remaining portion via Suez.

The dependence of the traditional British trade in the East (particularly that with Australia) on the Suez Canal was also strengthened in the post-war period by the growth of the Middle East oil industry since that offered ships using the route much cheaper bunkering fuel. Yet, the development of British/Eastern trade -

other than with the Middle East - via the Suez Canal became generally influenced by various wider political and economic factors such as the dissolution of the old British Empire in the Far East; the growth of inter-Eastern and inter-European trades; and the more serious attempt on the part of the underdeveloped countries East of Suez to industrialise their economies.

When Egypt nationalised the Suez Canal Company in July 1956 something between a fifth and fourth of the value of British trade was dependent on the Suez route. About 54% of total oil imports (crude and refined products) into Britain came via Suez. That considerable dependence on one route and the prospects of placing more in future was one of the main factors behind the British government's opposition to the nationalisation decision. Yet the main anxiety arose because of the fear that the Egyptian nationalistic policy might jeopardise other British interests in the East (particularly the Middle East) and might interfere with the international character of the Suez Canal in future. With the exception of France which had similar interests in the Middle East, the British government failed to build a close co-operation among Western allies over the Suez dispute. The U.S., whose help was particularly needed, was most reluctant to co-operate in the internationalisation of the Suez Canal - the only solution which the British and the

French governments accepted. The U.S. has had an absolute control over another international route: Panama Canal. Besides, the U.S. administration wanted to disassociate American interests in the Middle East area from those of Britain and France. The co-operation of other Western powers or maritime nationswith Britain over Suez was greatly affected by their individual interests in the Suez route and with Arab countries. The British-French dispute with Egypt ended with an attempt by the first parties to restore control over the Suez Canal by force. The military campaign in the first week of November 1956 failed to achieve its purpose and the Canal was blocked during the fight and remained unsuitable for navigation for five months.

The re-routing of the same volume of the Suez traffic via the Cape within a given period of time required a substantial increase in tanker and dry cargo tonnage. That was the major problem arising from the Suez closure in 1956 since the world fleet was almost in full employment. Compared with tankers the shortage in dry cargo tonnage was less critical and was substantially reduced after the withdrawal of a number of vessels from the American reserve fleet and the derequisition of vessels which the British and the French governments used during the Suez campaign. Besides, the British/Australian traffic in the Suez Canal, which represented a fairly

large proportion of non-oil trade in the East, was re-routed round the Cape and the Panama routes with very small increase in tonnage. On the other hand the shortage in tankers was only minimised by close co-operation between the governments and the oil companies of Britain, other Western European countries and the U.S. Sources of oil supplies were re-arranged; imports from the Middle East were cut down and more preference was given to the nearer sources of the Western Hemisphere in order to obtain maximum possible usage of available tanker tonnage. This measure was completed by a world wide co-ordination of the timing and movement of oil companies owned tankers, and by additions to the world fleet from the American reserve fleet. The gap in British - and Western European - oil imports which the closure of the Suez Canal created was considerably reduced although it could not be completely covered. Freight rates which had risen substantially after July 1956 - in expectation of a Suez Canal closure - continued to rise during November and December and surpassed the Korean war peak records. From January 1957 they began to decline, a sign that indicated the removal of the extra demand on world tonnage. The rise in freight rates significantly affected import prices particularly in the cases of oil and tramp carried commodities. But, with the exception of oil, freight rates exerted little effect on market prices. Oil

prices were also affected by the rise in f.o.b. prices of Western Hemisphere sources and by government taxation to enforce rationing during the crisis. Market prices of other commodities which normally came via Suez were more affected by existing stocks, short run disturbances in supplies due to irregular shipping arrivals and market speculations. The effect exerted by the Suez closure on Britain's balance of trade was mainly restricted to the severe disturbance in the figures of the three months November 1956 - January 1957. The fear that British exports to the East would be badly depressed proved to be quite excessive. Yet the situation could have developed differently if the Canal had remained closed for a longer period of time than actually happened. Britain's balance of payments was burdened by the purchase of oil from the dollar area, by withdrawal of accounts held in Britain by some countries friendly with Egypt and by the increase in the indebtedness of British shipping during the rise in tramp dry cargo and tanker freight rates. Yet the main effect on the balance of payments came about through the fall in the Sterling rates of exchange, as a result of the crisis, and the consequent huge fall in the gold and dollar reserves. The balance was restored only after the British government obtained massive external support of the currency and took strong measures to re-inforce the reserves in December 1956.

After the crisis had passed Western European countries, particularly Britain, were willing to reduce their dependence on the Suez borne oil. Britain's success in importing more of the Middle East oil via the Mediterranean coast was quite limited. The oil companies' new pipeline projects which planned for channeling the Gulf and Iranian oil via some Israeli or Turkish port at the Mediterranean were never realised for political reasons. Besides, the expansion in the capacity of the Iraqi and Saudi Arabian lines via the Eastern Mediterranean was relatively slow. The dependence on the Suez Canal for British oil imports from the Middle East decreased only gradually with the growth in the size of the tanker and the ability to place more reliance on the Cape route. This trend was particularly notable after 1963. Yet the decrease in the proportion of Middle East oil imports which came to Britain via Suez could have been much larger if the Egyptian administration had not continually expanded the dimensions of the navigable channel of the Canal. In fact the Suez Canal had increased its share in Middle East oil exports to West of Suez during the same period. Britain's reliance on the Canal was reduced not only by developing the use of alternative routes but also by placing less reliance on the Middle East oil as such. This could not be achieved

however by encouraging the coal industry at home and/or by stepping up atomic energy programmes. Consumption of Middle East oil in Britain continued to increase almost in the same explosive way as before the Suez crisis until new and rich oil fields were discovered in Africa (particularly in Libya) and British importers switched to them.

When the Suez Canal was closed for the second time in June 1967 only 24.5% of total British oil imports were dependent on that route against 54% in 1956. That was clearly the result of the continuous efforts towards that end during the decade separating the two crises. Consequently the effects of the second Suez closure have been less serious than the first. Nevertheless, there have been two other factors which have so far kept down the costs of the present crisis. These are the surplus in world tanker and dry cargo tonnage which grew almost continually since, and partly as a result of, the 1956 crisis; and second, the considerable growth in the size of the tanker and ore carrier during the last ten years.

At present the re-opening of the Suez Canal is apparently dependent on the withdrawal of the Israeli army from the positions which they occupied on the Eastern side of the waterway since last June. In future -

after the present crisis has ended - it would be essential for Egypt to remove all possibilities of war in the Suez zone in order to protect her interests in the Canal as well as the interests of the trading world. Leaving politics aside, the failure in achieving this aim would considerably affect the Suez traffic - in particular oil - and make more acute the difficult task of the Canal administration in trying to catch up with the rapid increase in trade and in the size of the tanker.

To Britain the Suez route, in spite of the decrease in its relative significance after 1956, has by no means become unimportant for total trade conducted with the Middle and the Far East as well as for British shipping interests, particularly liner firms. Therefore, it may be to Britain's advantage if and when a permanent solution for the Arab-Israeli dispute is found in order to safeguard the economic and commercial future of the Canal.

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INTRODUCTORY NOTES

First,

Sources are divided into Four Main Categories:

1) OFFICIAL SOURCES.
2) REPORTS AND PUBLICATIONS OF PRIVATE COMPANIES, BANKS, AND NON-GOVERNMENTAL INSTITUTIONS.
3) BOOKS.
4) PERIODICALS.

Second,

1) OFFICIAL SOURCES are divided into Two Sub-Categories:
   a) Governments and Parliaments. This is firstly arranged by Country and then by Source inside each of the countries.
   b) International Governmental Organisations. This is firstly arranged by Organisation and then by Subject when more than one reference is involved.
2) REPORTS AND PUBLICATIONS OF PRIVATE COMPANIES, BANKS, AND NON-GOVERNMENTAL INSTITUTIONS. This is firstly arranged by Company or by Institution and then by Subject
3) BOOKS, arranged by Author's Name.
4) PERIODICALS including Daily News Papers, arranged by Title.

Third,

One of the main Official Publications which have been consulted in this thesis is U.K/Parliamentary Papers, and a special note about their bibliography is due. Reference to Parliamentary Papers (P.P.) is either given directly by Year and Number of Volume, or by Page Number in the P.P. Official Index. This official Index is printed by

"Order of the House of Commons" and titled "General Alphabetical Index to the Bills, Reports, Estimates, Accounts, and Papers". In distinction from the official Annual Index of P.P., there are three other official indices (normally available in principal libraries of U.K.) for the period 1851 to 1959. The first of these indices covers the period 1852-99 (Published - London, 1909), the second covers 1900-49 (London, 1960), and the third for 1950-59 (London, 1963). When reference to Parliamentary Papers (P.P.) in the following bibliography is not given by year and volume it is given by page number in one of the three mentioned official indices. Example:

.....(Topic)....; P.P. (1852-99) Index, Page Number .

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